

A HANDBOOK OF SANSKRIT PHILOLOGY

Professor SATYA RANJAN BANERJEE



**SANSKRIT PUSTAK BHANDAR
CALCUTTA**

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PREFACE

TO THE SECOND EDITION

I am very glad to announce that my *Handbook of Sanskrit Philology* has reached a second edition which shows, without presumption, that it may be allowed to rest on its own merits. The first edition was published in November 1987, and was exhausted within five years of its publication. By the end of March 1993, not a single copy was left with me. Though it had a great demand all these years, I had a mind to revise the entire book with more materials than it contains now. But as time is getting on, and as my hands are always full and preoccupied with some other works, I could not get any chance to do so. But in the meantime, Shri Debasish Bhattacharya of Sanskrit Pustak Bhandar, Calcutta, has been pressurising me to reprint the first edition even without additions and alterations. Considering the demand of the book and the paucity of my time. I had to concede his proposal but with some additions and alterations, the outcome of which is the publication of this volume.

It goes without saying that many useful materials are added to this edition in the Appendix and within the book wherever possible. A few printing errors of the earlier edition are also removed. Additional bibliographical notes will, I believe, be helpful to the readers. I have made an humble endeavour to improve this edition without making the size of the book bulky. In short, any one who compares this edition with its earlier one will see at once the differences between the two.

As Sanskrit is vast and intricate, I dare not even claim to have attained the standard of perfection, and yet I can affirm at the same time that I have done what I could to bring the present edition to the level of the scholarship of the day. Wackernagel's *Altindische Grammatik*, consisting of six parts without verb (not yet published), and containing over 5000 pages, does not still claim to be a complete book of Sanskrit grammar or linguistics, not to speak of the present one which runs into just a little over four hundred

pages. And yet I do believe that not a single essential point of the subject is overlooked, and so a thorough study of the present edition will definitely give a good grasp of the subject, and will positively enhance the knowledge of Sanskrit philology, a subject which has been living in the realm of sad and doleful neglect nearly for the last fifty years.

Every language has a history of its own. It has its antecedents as well as its descendants. The antecedents are the history and pre-history of a language, and the descendants are the off-shoots of that language, if any, through the process of its evolution. As a result, a language can be studied from various points of view. These are Descriptive (or Synchronic), Historical (or Diachronic), Comparative (or Panchronic), Philosophical or Psychological.

Descriptive or Synchronic studies the language at a particular period of time. This period may be for a long time, or for a particular stage of its development. Macdonell's *Vedic Grammar* (1900) or Whitney's *Sanskrit Grammar* (1896 edn.) may fall within this category, even though they have cross references to their treatments of the Sanskrit language. Historical or Diachronic studies the language historically — showing different forms of the language at different stages of its development. Edward Vernon Arnold's *Sketch of the Historical Grammar of the Rig and Atharva Vedas*, JAOS, Vol-18, 1897, pp. 203-351, is an example of this type of grammar. Jacob Wackernagel's *Altindische Grammatik* in several parts is another example of this category. Comparative or Panchronic grammar compares different languages belonging to the same family. It compares different linguistic aspects of a grammar with its other cognate languages. This comparative study has given rise to a new subject which is, later on, known as "Comparative Philology". From the middle of the nineteenth century, innumerable treatises on comparative grammar have been written, the famous of which is Brugmann's *Grundriss der Vergleichenden Grammatik der indogermanischen Sprachen*, Strassburg, 1886-1900 (three vols in seven parts). Philosophical or Psychological study of a language can be made entirely on a different level. It is the philosophy or psychology of a

language which gets prominence in this category. *The Philosophy of Sanskrit Grammar* (1930) by Prabhat Chandra Chakrabarti is the philosophical study of Sanskrit grammar. Otto Jespersen's *The Philosophy of Grammar* (1924) deals with the philosophical aspects of grammatical categories. In 650 A.D. Bhartṛhari's *Vākyapadiya* (in three parts) is the first attempt in India to philosophise the Sanskrit grammatical terms. In the middle ages of Europe, the speculative grammarians analysed language from a psycho-philosophical point of view. Thomas of Erfurt's (1324 A.D.) *Grammatica Speculativa* was famous for this system of grammar.

This *Handbook of Sanskrit Philology* is a comparative grammar of Sanskrit. Every aspect of Sanskrit grammar is discussed in comparison with Greek, Latin, Gothic, Avestan, Old Persian and other cognate languages belonging to the Indo-European family of languages. I can humbly say that though short, it is a systematic and reliable handy book on Sanskrit philology.

Lastly, I once again thank Shri Debasish Bhattacharya for his initiative in bringing out the second edition of this book. If this edition proves useful to the students, I shall deem my labour well-rewarded. My only motto is—

karmanyē vādhikāro me

Calcutta

Satya Ranjan Banerjee

November 1, 1999

PREFACE

TO THE FIRST EDITION

A book on Sanskrit Philology has long been a desideratum. When I was a student in the post-graduate classes of Sanskrit and Comparative Philology, I used to feel the necessity of a book like the present one. As there was no handy book on this subject to fall back upon, students had to depend on the class-notes which were exceptionally scrappy and scanty. It is true that there are books on the subject, but they are exceptionally voluminous and antiquated, and therefore, it is difficult for a student to handle them. Some of the theories or statements as were current and valuable in those days or some seventy-eighty years ago, are outdated now. It is a pity that pioneers on the subject could not make any effort to write a handy book on the subject. Hence it is my humble attempt almost for the first time to write a short but systematic handy book on Sanskrit Philology.

The book has a long history. It was started sometime in 1962 at the behest of some of my students and friends, and was completed by 1964. By the middle of 1965 the manuscript was sent to the press. But for the type required for this book, the press could not undertake it immediately. In the meantime, I got a scholarship from the University of Edinburgh to study Greek and Latin with particular emphasis on classical Philology. So I got the manuscript back from the press. In a sense it was a boon in disguise. I got chances to revise the copy when I was in England for nearly ten years. After joining the University of Calcutta I started teaching Sanskrit Philology along with other things, and it helped me to prepare the copy for the requirements of the students. I must admit that the questions, comments and criticism of the students in the class have helped me much to mould the requirements of the students. This then is the background of how this small treatise came into existence.

It is needless to say that I have made the book as short

as possible keeping a keen and constant vigil to stick to bare requirements of the students. Elaborate discussions on any of the topics will be found in the books of the pioneers whose works are mentioned in the bibliography. In general I have tried to be very brief, though in some cases, I have made some elaborate discussions on a particular point to emphasize the importance of the topic. Introduction and Phonology are a little longer than is expected, while the morphology has been very brief, particularly in the sphere of declension and conjugation. The reason is obvious. Declension and conjugation being a very vast subject, I did not attempt to discuss them at length. In that case the book would have been very voluminous. Moreover, I have worked separately on the verbal system of Sanskrit which, I hope, will be published separately in course of time. I hope the reader will understand the main purpose of the book and will cover up the shortcomings of the book by the garb of their pedantic knowledge.

It goes without saying that this book does not aspire to any theorization. It is simply a collection of facts on several topics put together. Different views on the subject are kept side by side without making any comments on any one of them. The main idea of this book is to keep the students informed of the subject and its development. I have given in some rare cases for the sake of comparison the sūtras of Pāṇini to show how that phenomenon of linguistics is treated by him, and to dispel the idea that Pāṇini's grammar is devoid of any philological notions. For the same reason I have given sometimes more information on Greek and Latin on a particular point for the benefit of the students. Comparative vocabularies from other languages, like Gothic, Celtic, Lithuanian, Germanic, are given only where necessary, otherwise they are avoided. For the orthography of these languages, there are some difficulties of the press, and some of the signs and symbols could not be used in this book to show the subtleties of these languages, for, the press did not have them. However I feel this will not impede the case in point. In a book like this, a knowledge of Greek, Latin, Gothic and other languages will be helpful to have mastery of the subject and to understand even the

grammatical peculiarities of Sanskrit. I believe this book will also help the students who want to have some idea about IE Philology which actually started on the day when Sanskrit was discovered by the West. I personally feel that in reality 'Comparative Philology' was born on 2 Feb. 1786, when Sir William Jones (1746-1794) made his epochmaking statement on Sanskrit in the third annual Discourse before the Asiatic Society :

The Sanscrit language, whatever be its antiquity, is of a wonderful structure : more perfect than the *Greek*, more copious than the *Latin*, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs and in the forms of grammar, than could possibly have been produced by accident, so strong indeed, that no philologer could examine them all three, without believing them to have sprung from some common source which, perhaps, no longer exists : there is a similar reason, though not quite so forcible, for supposing that both the *Gothick* and the *Celtic*, though blended with a very different idiom, had the same origin with the Sanskrit; and the old *Persian* might be added to the same family, if this were the place for discussing any question concerning the antiquities of Persia.

As a sequel to this, scholars, having a real good knowledge of Greek and Latin at their back, started learning Sanskrit to find out the *common source*. By the untiring pursuit of their research, the first use of 'Comparative Grammar' came into existence in 1808 when Friedrich Schlegel (1772-1824) wrote his book *Ueber die sprache und Weisheit der Inder* ("On the Language and the Wisdom of the Indians"), Heidelberg, and said :

The decisive point which will illuminate everything here [i.e., the relationship of Sanskrit to other languages] is the inner structure of the languages, or the comparative grammar [*vergleichende Grammatik*], which will give us information wholly new on the genealogy of language just as comparative anatomy has shed light on higher natural history. [FL. p. 437]

Then followed hosts of scholars, like Franz Bopp (1791-1867), August Schleicher (1823-1868), Karl Brugmann (1849-1919), Berthold Delbrück (1842-1922), C.C. Uhlenbeck, (1866-), William Dwight Whitney (1827-1894), Antoine Meillet (1866-), Arthur Anthony Macdonell, Roland

G. Kent, Joseph Wright, Carl Darling Buck, Bata Krishna Ghosh and many others. All these pioneers have contributed so much to IE Philology that today in writing a book on Sanskrit Philology nobody could avoid their contributions to the subject. It is obvious therefore that I have consulted the most important and essential books of my predecessors on the subject, and directly or indirectly, I have incorporated freely the material from the works of these pioneers. In some cases, I have mentioned their names in the respective places. A short Bibliography in chronological order will tell the sources of my book. I have intentionally avoided giving foot-notes on my sources of information, because that will put the press in a difficult position to print. Secondly, the foot-notes will be exceptionally bulky, if I sincerely want to record my indebtedness to all types of authorities on whom the edifice of my book rests. However, I am indebted to all these predecessors.

It will be a difficult task for me to give here a catalogue of names of all persons from whom I have derived help, directly or indirectly, to prepare a book like this one. But at the same time I can only mention the names of those persons who have currently helped me in this matter. First of all, I must mention here the unbounded help I have derived from my brother-in-law, Shri Barun Kumar Mukhopadhyay, I.A.S., who, despite his multifarious activities and tremendous pressure of work, has gladly favoured me, without shrugging or shrinking, by going through the proofs, and by improving and correcting the style of my language in many places. I sincerely record here with gratitude his help so ungrudgingly proffered whenever solicited. I am also grateful to my brother, Shri Chitta Ranjan Banerjee, M.Sc., who has shown untiring interest in my work. I must record here the help I have got from my friend Dr. Joydev Ganguly, Shastri, M.A., Ph.D., of Calcutta University, who has not only gone through my proofs in many places, but also has suggested improvements. I shall fail in my duty if I do not mention the help I have got from my friend Professor Brahmananda Gupta, M.A. (Calcutta), Dr. Phil. (Bonn) who has translated a German passage into English for me (incorporated at page xviii) in collaboration with his wife

Mrs. Ingeburg Gupta, a lecturer in German, Jadavpur University. I am really grateful to both of them. I must also express here my gratitude to Mr. Pranabesh Sinha Ray, M.A., former Head of the Department of Comparative Philology, Calcutta University, for giving me advice in Germanic group of languages. Last of all, I must say that I am grateful to all my predecessors who have contributed much to the development of the subject, and whose contributions are of immense value for writing such a book.

I must record here my sincerest thanks to the authorities and the compositors of the press for undertaking such a laborious and hazardous task of printing this book with all these signs, symbols and tables on so many topics.

In fine, I can only say that if this small handy book of Sanskrit Philology becomes fruitful for the purpose it has been written for, I shall consider my endeavour amply rewarded.

15 October 1987

Satya Ranjan Banerjee

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INTRODUCTION

I. HISTORY AND PREHISTORY OF SANSKRIT

§ 1. Sanskrit as a member of Indo-European family of languages

Saṃskṛta, Europeanised as Sanskrit, or linguistically the Old Indo-Aryan (= OIA), belongs to the Indic group of the Indo-Iranian sub-branch of the Indo-European family of languages. It is, therefore, closely connected with the Indo-Iranian on the one hand and remotely with the Indo-European on the other.

It is said in general that languages are not isolated phenomena ; they have their descendants as well as antecedents. Sometimes they descend from some other languages, or from the earliest forms of the same language, and as time rolls on they are merged into other languages, or newer forms of the same language. Sanskrit, therefore, is not an isolated language ; it has its antecedents as well as its consequences. The antecedents of Sanskrit are immediately Vedic (often known as *chandaḥ* or *mantra*) and remotely Indo-Iranian and still more remotely Indo-European. Its consequences are the Prakrit languages and then the New Indo-Aryan languages (such as, Bengali, Hindi, Maithili, Punjabi, Rājasthānī, Gujarātī, Mārāṭhī etc) spoken throughout Northern India from east to west. Indo-European (= IE) is, therefore, the parent language of Sanskrit.

§ 2. Type of Sanskrit language

Sanskrit or Old Indo-Aryan is inflexional and synthetic type of language. It is a type of language where case-terminations, suffixes, prefixes, and infixes play a very prominent part, without which its very existence is not quite imaginable. The same is true with Greek, Latin and other older languages belonging to the IE family. And in this type of inflexional languages word-order in a sentence is not strictly followed.

Word-order is the most important thing in a language. In some languages they are so important and intrinsic that any alteration of word-order may lead to a different meaning altogether. In inflexional type of languages, of course, the change of word-order does not affect the meaning. Thus the English sentence—'the father sees the child'—will be in Sanskrit *pitā putraṃ paśyati*, in Greek *patēr paida hōrei* and in Latin *pater puerum videt*. In Sanskrit, Greek and Latin if we change the word-order of the sentence, the meaning is not altered. But in English the change of word-order will give a different meaning, as 'the child sees the father' which will be in Sanskrit *putraḥ pitaraṃ paśyati*, in Greek *patēr paida hōrei* and in Latin *puer patrem videt*, where the inflexion also changes, but 'the father the child sees', gives us no meaning at all in English. So the type of a language indicates the word-order of a language. Sanskrit, Pāli, Prakrit, Avestan, Old Persian, Greek, Latin, Gothic and other cognate languages are inflexional from that point of view, and so word-order is not an important criterion.

§ 3. Location of Sanskrit

Originally the geographical boundary of Sanskrit was only in the Northern part of India beginning from the far West or North-west to the East; but gradually it had extended its boundary throughout the length and breadth of India side by side with other families, such as, Dravidian, Austric and Sino-Tibetan. Apart from India, Sanskrit had also influenced its neighbouring countries, like China and Tibet in the north, and Sumatra, Jāvā, Borneo etc. in the south-east as well as the western neighbours of India in the past. But now-a-days Sanskrit is being cultivated not only in India, but also in almost all parts of the globe as one of the vehicles of the sources of Indo-European culture and history, mythology and religion, language and literature.

§ 4. Sanskrit vs Indo-Aryan and its division.

The name 'Sanskrit' as a distinct type of language is of late origin. It does not occur in this sense in the Vedic literature,

nor is it mentioned by Pāṇini (4th cent. B.C.) himself. In the Ṛgveda (I. 164. 45), Taittiriya Saṃhitā (VI. 4.7.3), Maitrāyaṇi Saṃhitā (I.11.5) and other Vedic texts references are found for four types of speeches, but specifically the name Sanskrit is not mentioned among them. In the Śatapatha-Brāhmaṇa (IV. 1.3.16) also we have different references to the diversity of speeches, or to the different kinds of Aryan speech (*ārya-bhāṣā*), but the name Sanskrit is not recorded there. A story in the ŚB (III. 2.3.15, & XI. 4.1.1) tells us that in the North, there is a type of speech which is much better than that of the other places and people used to go to the North to learn that better language. But what is the name of that better language is not clearly stated there, though scholars assume that that language was Sanskrit. In the Aitareya (III. 2.5) and Śāṅkhāyana Āraṇyakas (VIII. 9), Aryan speech (*āryā vāk*) is specifically mentioned for the first time. This *āryā vāk* is also otherwise known as *brāhmaṇyā vāk* (AĀ. 15.2), but still the name Sanskrit is not categorically mentioned.

At a later stage between 700 B.C. and 400 B.C., the name *Samskṛta* as a language is also not mentioned, though the explicit references to different dialects may be gleaned out. In the Nirukta (5th cent B.C.) it is stated that in different places different roots are used for the same type of expression (Nik. II. 2), and the same is repeated in the Introduction of the Mahābhāṣya of Patañjali (150 B.C.) with a little more elaboration, but the name Sanskrit is not mentioned there. In Pāṇini's (4th cent. B.C.) *Aṣṭādhyāyī* no reference to Sanskrit as a language is found, though he describes the Vedic language as *chandaḥ*, which has been described by later writers as *mantra*. Yāska (5th cent. B.C.) and Pāṇini (4th cent. B.C.) also refer to a language known as *bhāṣā* whose actual significance has not yet been ascertained. Probably they might have referred to a non-Vedic spoken Sanskrit speech current in their time which was quite different from *chandaḥ* or Vedic. Some, however, consider *bhāṣā* of Pāṇini as a spoken speech. It appears from the above discussion that whatever may be the reason, it is true that from the time of Ṛgveda (1500 B.C.) down to Pāṇini (4th

cent. B.C.) the very name *Samṣkṛta* as a distinct type of language is not mentioned.

In the *Sundarākāṇḍa* (V. 30, 17-18) of the *Rāmāyaṇa* it occurs for the first time as a type of language which is fit for a Brahmin :

ahaṃ hyatitanuścaiva vānaraśca viśeṣetaḥ |
vācaṃ codāhariṣyāmi mānuṣīm iha samṣkṛtām ||
yadi vācaṃ pradāsyāmi dvijātir iva samṣkṛtām |
rāvaṇaṃ manyamānā māṃ sītā bhītā bhaviṣyati ||

Hanūmān was hesitating whether he would adopt Sanskrit language for his secret news to be communicated to Sītā ; otherwise, Sītā might misunderstand him as Rāvaṇa who was in the habit of speaking *Samṣkṛtā vāk*.

Kālidāsa (4th or 5th cent. A.D., if not earlier) is the first, as far as it is known to us, who considers Sanskrit as a distinct type of language side by side with Prakrit. In his opinion Sanskrit is a "purified, refined speech" (*saṃskārapūtā vāk*) whereas Prakrit is a language "easy to understand" (*sukhagrāhyā bhāṣā*). This idea of his is reflected in his *Kumārasambhava* (I. 28) while glorifying Himālaya for the birth of Pārvati—

saṃskāravatyeva girā maṇiṣi tayā sa putaśca vibhūṣitaśca.

—"He (i.e. Himālaya) is purified and ornamented by her (birth) like a learned man embellished with purified and refined speech".

In one verse of the *Kumārasambhava* (VII. 90) Kālidāsa must have suggested the two languages—Sanskrit and Prakrit side by side. On the occasion of the wedding of Śiva and Umā, the goddess Sarasvatī addressed the newly wedded couple in two different languages :

dvidhā prayūktena ca vāñmayena sarasvatī tan mithunaṃ nunāva |
saṃskārapūtena varaṃ vareṇyaṃ vadhūṃ sukhagrāhya-nibha-
ghanena ||

—"By using language in two different ways Sarasvatī hailed the couple—the adorable bridegroom by speech purified by

perfection or refinement (= Sanskrit) and the bride in verses (or compositions) easy to understand (= Prakrit)".

That Sanskrit is to be pronounced with proper articulation and accent in order to get its result is stated in the *Raghuvamśa* (X. 36).

purāṇasya kaves tasya varṇasthāna-samīritā |
babhūva kṛta-saṃskārā caritārthaiva bhārati ||

—'The speech of that Primeval Bard pronounced (articulated) from (by the help of) the different organs of speech and therefore becoming distinct and correct was certainly successful (had gained its end)'. [Nandargikar].

Though the name *Samskṛta* or *Prākṛta* is not positively mentioned by Kālidāsa, it can easily be inferred from the above references that Kālidāsa has referred to these two languages.

Rhetoricians beginning from Bharata (3rd cent. A.D.) down to Jagannātha (16th cent. A.D.) have mentioned Sanskrit as a distinct type of language, when they have classified literature language-wise into Sanskrit, Prakrit, Apabhraṃśa and others.

The orthodox Pundits call Sanskrit as *deva-bhāṣā* (divine speech) in which the sacred books of the Hindus are written. It is often personified as *Vāgdevī* ('goddess of speech'). In the *R̥gveda* (X. 6.71) one entire sūkta is found for the glorification of *Vāk*. It is also known by the appellations *gīrvāṇa vāṇi*, '*daivī vāk*', etc. The name *bhārati* in the sense of speech (*vāk*) might have originated from the indigenous name of *Bhārata* (*varṣa*). Therefore, the language of *Bhārata* is *bhārati* ('speech'). However, to them language was either *Samskṛta* 'purified' or 'cultivated', or *Prākṛta* 'common man's speech' or 'colloquial speech', or *Apabhraṃśa* 'off-standard' or 'fallen speech'.

Though Sanskrit was cultivated in all right earnest, the glorification of Sanskrit became blurred, when it was compared with Prakrit, a common man's language. This can be illustrated from the works of later writers.

In the opinion of Rājaśekhara (900 A.D.) Sanskrit is harsh, while Prakrit is sweet. In his *Karpūra-mañjarī* (I, 8) he says—

parusā sakkaya-bandhā pāua-bandho vi hoi suumāro |
purisa-mahilāṇaṃ jettiam ihaṇtaraṃ tettiāṃ imāṇaṃ ||

—‘Sanskrit poems are harsh, but a Prakrit poem is very smooth ; the difference between them in this respect is as great as that between man and woman’. [Konow]

In the 12th cent.A.D. when the modern Indo-Aryan languages began to appear on the horizon, Dāmodara Miśra in his book, *Ukti-vyakti-prakaraṇa*, stated that the then vernaculars of Northern India were corrupt forms of Sanskrit speech.

And even as late as the time of Vidyāpati (15th cent. A.D.), Sanskrit was a language of the learned as he says—

sakkaya-vāṇī buha-ana bhāvai,
pāua-rasa ko mamma na pāvai |
desila-vaanā sava-jana miṭṭhā,
tē taisana jampaṇo Avahaṭṭhā || [Kirtilatā]

—‘The learned like the Sanskrit language, they do not get the proper sentiment of Prakrit (poems) ; vernacular (language) is sweet to all, and hence I speak (i.e. write) in Avahaṭṭha (language).’

Though the name *Samskṛta* is of late origin, it is the only name which is accepted as a language instead of *āryā-bhāṣā*, *daivi vāk* or *deva-bhāṣā*.

Modern philologists, instead of calling Sanskrit as *deva-bhāṣā*, have designated it otherwise. Taking into consideration that Sanskrit belongs to the Aryan (= *ārya*) group, they have called this language by the term Indo-Aryan. The reason for calling this language as *ārya* is not far to seek. It was once the name of a race as well as a language, spoken in the larger parts of Asia and Europe. In the *R̥gveda* this word is found as *arya* > *ārya*, ‘noble’, Avestan *airya*, Old Persian *ariya* (cf. Pers. *Ariyāramna*, Gk. *Ἀριάρωνης* (Ariaramnēs) meaning

the truly devoted, then the people of (their) own race', New Persian *ēran* (= Eng. Iran). But the Greek word *ario/aria* (cf. Hdt. §62. *hoidēmēdoi ekalēonto palai pròs pantōn arioi*) is a Graecized old Persian proper name *ariyāramna* > Gk. *Ἀριάραμνης* (*Ariarāmñēs*). The word *ἀριστος* (*áristos*) meaning 'noblest' can be compared with the Sanskrit *āryiṣṭha*. Greek *ἀρετή* (*árete*) means 'excellent'. This Skt. *ārya* is connected with the Celtic *airem* = *aryaman*, *erin* [gen. *erenn*] = *aryana*, *aire* [gen. *airech*] = *aryaka*. The oldest name of Ireland is *eriu* < *erin*. The word originally meant a 'friend' or a 'noble person'. In Ireland persons belonging to the noble family are known as *áire*. So in this sense, *ārya* or Aryan means 'noble race or people.'

There is another explanation of the meaning of the word *ārya*. It was once believed that the Aryan race was originally in the habit of ploughing for their livelihood, for which scholars thought that the root of *ārya* might be originally connected with the sense of ploughing. In this sense the Latin word *arātio* (< *arāre*), Goth. *airtha*, Old English *eorthe*, ME *erthe* mod. Eng. *earth*, German *Erde* (cf. Teutonic *arivistus*) etc. are found. Some say that the names of peoples as well as their countries, such as *Ārya*, *Iran*, *Irani*, *Iranian*, *Airem* (?), *Erin Ireland* are more or less connected with *ārya*. However, all these words may have a direct or indirect connection with *ārya* which was once popular in the sense of both race and language.

Modern philologists have used the term Indo-Aryan in a special sense to designate the Aryan languages of India by one single term covering a period of 3500 years. To them Indo-Aryan language means the Vedic and classical Sanskrit as well as Prākṛit and Pāli and modern languages of Northern India, such as, Assamese, Bengali, Oriya, Maithili, Hindi, Punjabi, Sindhi, Rājasthānī, Gujarātī, Mārāṭhī and others. All these languages do not belong to the same period. They have originated in different places and times. Hence the linguists have divided this Indo-Aryan language into three broad periods, each of which is again sub-divided into many groups. These three divisions are old, middle and new

Historically, Sanskrit including Vedic belongs to the oldest period of the Indo-Aryan line, hence it is known as Old Indo-Aryan (= OIA) which extends from 1500-500 B.C. covering a period of one thousand years. Similarly the middle period of Indo-Aryan language is Prākṛit, Pāli, some Inscriptional Prākṛits and Apabhraṃśa generally designated by the term Middle Indo Aryan (= MIA) which covers a period of fifteen hundred years from 5th cent. B.C. down to 1000 A.D., while the modern period of Indo-Aryan language is the New Indo-Aryan languages of Northern India, known as NIA, which started from 1000 A.D. In the eye of the linguists the indigenous term *Samśkr̥ta*, or *Chandaḥ* or *Mantra*, is not adequate enough to include all these stages of languages beginning from the oldest period down to the modern age, particularly when the same language has three different names for its three different periods. Sanskrit is merely a part of the whole. Hence the necessity of accepting the term Indo-Aryan which is not only wider, but also more appropriate in this sense, because it covers all the periods including its descendants by one single name, with its periodical appellation—old, middle and new.

But it should be noted here that Sanskrit is used by orthodox Pundits in the sense in which the Old Indo-Aryan is used by modern philologists. Indian authorities have different words for these three stages of Indo-Aryan languages. In order to maintain parity of the origin of different languages belonging to different periods, but originated from the same group of language, the term Indo-Aryan is used in spite of the Indian names for these different languages. Historically as well as linguistically, Indo-Aryan seems to be more appropriate and adequate, because it indicates one language including its three stages—old, middle and new.

But it can be noted here that the indigenous name *Prākṛta* standing for 'common man's language' or 'spoken language' of Northern India can be used for the three stages of Indo-Aryan as primary, secondary and tertiary Prakrits standing for OIA, MIA and NIA respectively.

Though the immediate antecedent of Indo-Aryan is Indo-Iranian, the prehistory of Indo-Aryan can be traced from Indo-Hittite whose date is approximately considered between 3000-2500 B.C., after which it was split up into Hittite and Indo-European through an intermediate stage of Primitive Indo-European.

The dates of Indo-Aryan stages are in accordance with the development of Indo-Aryan from Vedic down to the present time. In each stage some sorts of new characteristics of Indo-Aryan are noticed, and these are either absent or lost altogether in other stages. The middle and new Indo-Aryan stages are also shown side by side to note the interactions of the two stages. The approximate date of the Middle Indo-Aryan stage is reckoned from 6th or 5th cent. B.C. which date is connected with the birth of Mahāvīra and Buddha who were supposed to have spoken in their own tongue in Ardha-Māgadhi Prakrit and Pāli respectively, though MIA linguistic features can be traced from the Vedic times. The NIA stage shows how the neo-Sanskrit period is greatly influenced by the then vernacular of Northern India.

It will be seen from the table below that the Indo-Aryan language has passed through three stages of development, partly consecutive in time, but partly also parallel. There is no denying the fact that at certain periods of time, at least, two stages of Indo-Aryan intersect with one another, and develop side by side influencing each other in their linguistic patterns, and as such, all the timings, though based on some historical events of India which approximately coincide with the beginning of the subsequent stages, are nothing but approximate just for our convenience.

Below are given the divisions of Indo-Aryan language of 3500 years into three distinct periods, each of which is again sub-divided into many sub-groups. These divisions have been made in accordance with the peculiarities of languages preserved in different stages.

Different Stages of the Development of Indo-Aryan

3000—2500 B.C. = Indo-Hittite Stage

2500—2000 B.C. = Indo-European Stage

2000—1750 B.C. = Indo-Iranian Stage

1750—1500 B.C. = *Proto-Stages*

(i) Proto-Iranian, and (ii) Proto-Indo-Aryan

1500 B.C. onwards = INDO-ARYAN STAGE

Different periods and development of Indo-Aryan [3500 years of development]

Approximate Dates	Primary Prakrits	Secondary Prakrits	Tertiary Prakrits
1500—1250 B.C.	Old Indo-Aryan	Middle Indo-Aryan	New Indo-Aryan
1250—1000 B.C.	(1500—500 B.C.)	(600/500 B.C.—1000 A.D.)	(1000 A.D. onwards)
	Sanskrit including Chandaḥ/Mantra	Pāli, Prakrit, Inscriptions, Apabhraṃśa	ādhunik āryabhāṣā
1000—800 B.C.	Early Vedic (RV. II-VII)		
800—700 B.C.	Middle Vedic (RV. I, VIII-X, SV., YV., AV.)		
700—600 B.C.	Late Vedic (Brāhmaṇas)		
	Pre-Classical (Āraṇyakas)		
	Early Classical (Upaniṣads, Sūtras)		
600—500 B.C.	Formation of Classical stage (Yāska, Prātiśākhya etc.)	Beginning of MIA	
500—400 B.C.	Epic periods. (Rā. Mbh.)		
400—200 B.C.	I Classical (Pāṇini)	I Early MIA	
200 B.C.—			
200 A.D.	II Classical/Buddhist-Sanskrit	II Transitional MIA	
200—600 A.D.	III Classical/	III Second MIA	
600—800 A.D.	IV Classical/	IV Third MIA	
800—1000 A.D.	V Classical/Jaina Sanskrit		
1000—1500 A.D.	Post Classical Stage		
1500—1800 A.D.	Neo-Sanskrit Stage		
	Vernacularism in Sanskrit		
1800—onwards	Modern Sanskrit		

Beginning of NIA

II. PRE-HISTORY OF SANSKRIT

§ 5. What is Indo-European ?

The term Indo-European is used to denote a hypothetically reconstructed language whose existence has only been hypothetically established without any factual findings of this language in any form in this world ; but whose existence can only be hypothetically equated after a careful comparison of some languages, such as, Sanskrit, Avestan, Old Persian, Albanian, Armenian, Lithuanian, Latvian, Old Prussian, Old Church Slavonic, Russian, Greek, Latin, Germanic (Gothic), Celtic and Tokharian. All these languages were inflexional and synthetic at the beginning and their descendants gradually became analytic. These languages are akin to each other in linguistic structure, and therefore their phonological, morphological, syntactical and semantic equations are possible. Their similarities are so strong indeed that scholars have become unanimous in grouping them into one common family which perhaps no longer exists. The common name of the family as suggested by scholars is Indo-European. It is true that these languages have undergone a change and have developed in their own way, but still they have followed some *definite laws* in the course of their development and changes. Hence it is not difficult for us to group them under one family.

§ 6. Primitive Indo-European or Proto-Indo-European

Sometimes the Primitive or Proto-Indo-European (– PIE) is used by some in order to distinguish IE from its descendants.

§ 7. Type of Indo-European

From the structure of the languages belonging to the Indo-European family, it is said that the Indo-European language was originally inflexional and synthetic and as time rolls on their descendants have become analytic, i.e., they have become modified in the direction of simplification. They have lost their inflexional endings and the use of word-order has also been changed, in some cases their suffixes and prefixes have also been simplified to a moderate stage.

§ 8. Different Names for Indo-European

The names by which the hypothetically reconstructed Indo-European language is designated are

- i) the Aryan,
- ii) the Indo-Germanic,
- iii) the Indo-Celtic, and lastly,
- iv) the Indo-European

i) *The Aryan*

The term 'Aryan' was first used by Max Müller and other writers in English. In the opinion of Max Müller the IE people were originally in the *ārya* group. But now this term is altogether discarded, because this name now indicates the Indo-Iranian or Aryan sub-branch of the IE family of languages. So the term Aryan cannot be used for the whole family of IE languages.

ii) *The Indo-Germanic*

The term Indo-Germanic was never used by Franz Bopp, the father of Comparative Philology, but it seems to have originated with Julius von Klaproth who in 1823 in his *Asia Polyglotta*, used the term and later on was employed by German scholars, such as, Otto Schröder, H. Hirt, A. Kühn, G. Meyer, S. Feist, and a few others outside Germany. This term became popular at a time when the Celtic languages were not fully known as belonging to this group. This term is also discarded owing to the discovery of the Tokharian as well as by the fact that one part of the term indicates the name of a country, while the other a group of languages. This term hardly became popular outside Germany.

iii) *The Indo-Celtic*

After the discovery of the Celtic language in the middle of the nineteenth century by Johann Kaspar Zeuss (*Grammatica Celtica* written in Latin in 1853 published from Leipzig) as one of the members belonging to the IE family of languages, it has been decided by some scholars, such as, F. Spiegel, that the Indo-Germanic should be replaced by Indo-Celtic, because it is not Germanic, but Celtic which is the utmost branch to the

occidental. But this term is also avoided by all, because Celtic is one of the branches of the whole family.

iv) Indo-European

The term Indo-European was originally coined by Thomas Young, a well-known physician and physicist, who in his article published in the tenth volume of the *Quarterly Review* (October 1813), had used the word without any remark. This term was not very popular at that time. Later on, in the absence of any adequate term and to avoid some other terms, this term was used to designate a group of languages, and it is accepted now-a-days by the American, English, Italian and French philologists. Peter Giles¹ has objected to use this term on two grounds: first, it will leave out the Iranian, the Armenian and the Tokharian, secondly, the one part of the term denotes a continent, while the other a country. But on the whole, this term is least objectionable and it does not denote any language as such, but the names of the areas (Indo = India and Europe). In fact the meaning of the term is free from any ambiguity and hence this term may be chosen in preference to others.

§ 9. Location of Indo-European

Originally Indo-European family of languages was spoken in the south-western Asia as well as in the north-eastern India and in almost all of Europe. But now-a-days, owing to foreign colonization it is spoken in the form of superimposed languages in almost all parts of the globe. Hence the number of speakers of this language through their descendants is more than 1000 millions.

§ 10. Home of Indo-European

Much has been written on the problem of the original home of Indo-Europeans. but none has come as yet as decisive conclusion to be accepted. Different parts of Asia and Europe

1. *A Short Manual of Comparative Philology*, 2nd edn. London, 1901, pp. 7-9

have been suggested as the original home, but all seem to be a mere guess-work. Some say it is neither Asia nor Europe, but a midland between the two should be sought for the IE people, others think that it is in Asia Minor. Below are given the names of the places which have been suggested as the original homeland of the IE people. The parts which are considered to be the homeland of the Indo-European are India, Mesopotamia, Old Bactria between the Hindukush and the river Oxus and Belu-dagh, Armenia, the steppes of Turan or the north of Caucasus, the Plateau of Pamir, Aral-Caspian steppes, the Plateau of Central Asia, or Central Asia, and the Punjab in the Asiatic land ; and south Russia, Danube, Germany, south-eastern Baltic region, south-easten Europe, Poland, Lithuania, Ukraine, Russia, south and west of the Volga and finally Austria-Hungary in Europe. This shows that the problem is still unsolved.

§ 11. The Earliest Documents of the IE

The IE literature did not develop all at a time. After their migration in roundabout 2500 B.C., the IE people settled at different places at different times, and long after their settlement, the separate branches of the IE people started writing their literatures which were the earliest documents of the IE peoples. Though the dates of these documents vary by hundred or even by thousand years, the basic grammatical structures and vocabularies, as embalmed and treasured up in their documents, can be compared together to come to a conclusion. For the reconstruction of IE language, these earliest documents of the IE languages are to be considered, and below are given the earliest literatures with their dates. The IE reconstruction is made primarily on the basis of these documents, and secondarily on the next earliest literature.

<i>Approx. dates</i>	<i>Languages</i>	<i>Documents</i>
1500-600 B.C.	Sanskrit	Samhitās, Brāhmaṇas, Āraṇyakas, Upaniṣads, Sūtras, etc.
800-700 B.C.	Greek	Homeric Greek.

<i>Approx. dates</i>	<i>Languages</i>	<i>Documents</i>
700-500 B.C.	Avestan, Old Persian	Avestan and Old Persian Inscriptions.
700 B.C.	Italic	Praenestine fibula, <i>Manios med fhefhaked Numasioi</i> (Manius me fecit Numerio),
600 B.C.	Latin	Fragmentary inscription on the <i>lapis niger</i> in the Roman Forum.
300 B.C.	Latin	Inscriptions on coins, mirrors, cups and then classical Latin literature.
300 B.C.—200 A.D.	Gaulish	Names of persons and places, glosses and some 78 brief inscriptions, a large number of <i>graffiti</i> found at La Graufesenque (Aveyron).
4th Cent. A.D.	Gothic	Translation of the Bible by Arian Bishop Wulfilas (311-383 A.D.)
5th Cent. A.D.	Armenian	Translation of the Bible.
7th Cent. A.D.	Tokharian	Exploration of Chinese Turkistan revealed a number of Buddhist and medical works in the region of King Suvarnata.
8th Cent. A.D.	Brythonic	Some glosses.
9th Cent. A.D.	Old Church Slavonic	Translation of the Bible in the Old Church Slavonic.
12th Cent. A.D.	Cornish	Some glosses.
15th Cent. A.D.	Albanian	Baptismal ritual of 1462.
16th Cent. A.D.	Albanian	Translation of the Bible in 1555.
16th Cent. A.D.	Baltic	Luther's <i>Catechism</i> in Old Prussian (1545), Lithuanian (1547), Lettish/Latvian (1586).

§ 12. Postulation of Indo-European and its Reconstruction

On the basis of the documents of these related languages, the postulation of the hypothetically reconstructed IE language is made. This postulation of the IE language is apparently correct as far as the methods of reconstruction are valid. Only slight variations in phonology and morphology have put them to a far distant country. And once these discrepancies and variations are equated, it would be possible to trace the history and development of any language in the world.

The Greek, the Iranian and the Aryan languages have mainly preserved the IE characteristics in profusion. They are so closely related to each other that it is easy for us to trace the history, development and relation of each with its kindred languages. The peculiar characteristics of IE are the three series of gutturals, its syllabic liquids and nasals, its schwa, its eight case-endings and three numbers (fully preserved in Sanskrit), its declension and conjugation, etc, all will give us a glimpse to say that the above mentioned languages have more or less preserved the IE characteristics.

Finding that the language-groups, such as, Indo-Iranian (Sanskrit, Avestan and Old Persian), Armenian, Albanian, Baltic (Old Prussian, Lithuanian, Latvian), Slavic (Old Church Slavonic, Russian), Greek, Latin, Germanic (Gothic), Celtic and Tokharian resemble each other so much in phonology, morphology, syntax and semantics that the similarities cannot be reckoned as mere chance, but force us to conclude that they are divergent forms of a single prehistoric language which perhaps no longer exists, and to which the name Indo-European or Primitive or Proto-Indo-European is given. For example to understand their similarity some vocabularies can be compared :

Skt. *madhu*, Av. *madu*, Lith. *midus*, OChSl. *medŭ*, Gk. *methu*, Eng. *mead* (wine) ∴ IE. **medhu*.

Skt. *asvā*, Av. *aspā*, Lith. *aszwa*, cf. Gk. *hippos*, Doric. *ikkos*, Lat. *equa*, Goth. *alhva*, Irish. *ech*, ∴ IE. **equā*.

Skt. *nāus*, Gk. *nāus*, Lat. *navis*, Irish. *nói*, O. Nor. *nór*,
 ∴ IE. *nāus*.

Skt. *dyāus pitár*, Gk. *zeüs patēr* = *zeúpáter*, Lat. *dies-pater*,
 = Júpiter = *Jupitar*, ∴ IE. *dīēus patēr*.

Skt. *śván* (dog), Lith. *šuõ*, Gk. *kúõn*, Lat. *canis*, Germ.
Hund, Eng. *hound*, Irish. *cú*, ∴ IE. **k̑uon*.

Skt. *dar-* (split), Arm. *terem* (flay), Lith. *dirti*, OChSl.
derq, Gk. *dērō* (flay), Germ. *zehren*, Eng. *tear*, Breton.
darn (piece), ∴ IE. **der-*.

Reconstructed IE sounds

On the basis of the sounds of different IE languages, as can be gleaned from common vocabularies, it is now assumed that the IE had the following sounds :

- I. Vowels : *a, e, o, i, u, r, l, n, m, ə* / *ā, ē, ō, ī, ū, ȳ, ȳ̄, ȳ̄̄, m̄* / *ai, ei, oi, au, eu, ou* / *āi, ēi, ōi, āu, ēu, ōu* /
- II. Consonants : *k̑, k̑h, ǵ, ǵh, ǵ̑* / *q, qh, g, gh, ǵ̑* / *q̑, q̑h, g̑, g̑h, (ǵ̑̑)* / *t, th, d, dh, n* / *p, ph, b, bh, m* / *i, r, l, u, s*

Reconstructed IE grammatical features

In a similar way on the basis of their phonological and morphological structures of these languages, it is also presumed that the IE had the following grammatical features.

1. Accent : The IE is characterised by accent which was mainly pitch, and partly stress, and the pitch accent is preserved in Vedic Sanskrit and Greek.
2. Ablaut : Ablaut is another important characteristic of IE, and this is fully preserved in Greek and Sanskrit (with vowel modification) and partly in other IE languages.
3. Sandhi (Contraction) : Very elaborate in Sanskrit and Greek, but also found in other languages in the form of contraction.
4. Cases and case-terminations, Declension.

5. Verbal system elaborate, Roots (monosyllabic), conjugation.
5. Suffixes and prefixes.
7. Compounds.

From these and other types of similarities scholars like Franz Bopp (1791-1867), August Schleicher (1823-1868), Karl Brugmann (1849-1919) have laboured much to reconstruct the hypothetically framed IE language on the basis of some common vocabularies and this reconstructed IE language is now an established fact in the IE world.

August Schleicher has gone a bit further. He has ventured to reconstruct a little fable, "The Sheep and the Horses" in the proto IE language (*die indogermanische ursprache*). The story of Schleicher in primitive language is given below for the benefit of the readers (*Eine fabel in indogermanischen ursprache in Beiträge zur vergleichenden Sprachforschung*, 5, 1868, pp. 206-8).

Avis Akvasas ka

Avis, jasmin varna na ā ast, dadarka akvams, tam, vāgham garum vaghantam, tam, bhāram magham, tam, manum āku bharantam. Avis akvabhjams ā vavakat : kard aghnutai mai vidanti manum akvams agantam.

Akvāsas ā vavakant : krudhi avai, kard aghnutai vividvantsvas : manus patis varnām avisāms karnanti svabhjam gharmam vastram avibhjams ka varnā na asti.

Tat kukruvants avis agram ā bhugat.

The Sheep and the Horses

A sheep, on which there was no wool (a shaven sheep) saw a horse, pulling a heavy cart, carrying a heavy load, (and) carrying a man swiftly. The sheep spoke to the horse : the heart becomes oppressed in me (it makes me sorry at heart) seeing (the man) pushing on the horses.

The horse spoke : listen, sheep, the heart becomes oppressed (in those) who have seen (it makes us sorry at heart, as we know) : the man, the master, makes (the) wool of the sheep (into a) warm dress (for) himself, and to the sheep, there is no

wool (the sheep however have no more wool, they are shaven : (it happens to them still worse, than to the horse).

Having heard this, the sheep turned (escaped) into the field (it ran off).

In a similar way, Suniti Kumar Chatterji has also reconstructed the *Parable of the Prodigal son* of the Bible (vide St. Luke XV. 11-12) in Primitive Indo-European. Below is given first the story in English and then its different versions in Greek, Latin, Gothic and its translation in Vedic and classical Sanskrit, and then in primitive Indo-European :

Parable of the Prodigal Son.

A certain man had two sons ; and the younger of them said to (his) father—Father, give me the portion of goods that falleth (to me). And he divided unto them (his) living [St. Luke XV. 11-12]

Greek :

ánthrōpós tis eikhen dúo huiōús. kai eípen ho neōteros autōn tōi patrī—páter, dōs moi tò epibállon mérōs tēs ousias. ho de dieílēn autois tôn bíon.

Latin :

Homo quidam habuit duos filios : et dixit adolescentior ex illis patri : Pater, da mihi portionem substantiae, quae me contingit. Et divisit illis substantiam.

Gothic :

mannē sumš aihta twans sununs. Jah qaþ sa jūhiza izē du attin : atta, gif mis sei undrinnai mik dail aiginis ; jah disdaila im swēs sein.

Vedic (Reconstructed) :

mānuṣaḥ kāśya-cid dvā sūnū āstām. ca āvocat (or ā vaucat) ētaylor nāvatarah ātmane tāśmai pitrē—pitār dehi me tām bhāgam rāyās te, yāḥ māyī āpi patati. sa ha tābhyām svām ājīvam ābhāk.

Classical (translation) :

kasya-cid manuṣyasya dvāu putrāu āstām. taylor [madhye]
kaniyān pitre (pitaram vā) āha (or uvāca)—pitaḥ, bhavatām
vittasya yo bhāgo mayi āgamiṣyati, tam me dehi. tato'sau
svaṃ vittaṃ vibhajya tābhyāṃ pradadāu.

Indo-European (Reconstructed)

mónusos q^uósī o-q^uid duō sūnū ēstōm. q^ue óitoious néuoteros
ātmonai patrāi ē uouq^uet—pāter, daddhi moi tōm bhāgom rēiós
toi, iós mēi ēpi peteti. só g^uhe tōbhiōm suōm ōg^uiūom ūi
ēbhōgt.

§12. Classification of Indo-European

Linguistically as well as geographically, Indo-European is divided into two broad divisions, each of which is again sub-divided into many sub-groups. Linguistically it is divided into the *satəm* and *centum* groups which are geographically the Eastern and the Western side of Asia and Europe respectively. It should be noted that Tokharian though geographically is in the Eastern side, linguistically belongs to the *centum* group. The languages belonging to the *satəm* group are Sanskrit, Avestan, Old Persian, Albanian, Armenian, Baltic (Lithuanian, Latvian, Old Prussian) and Slavonic, (Old Church Slavonic, Russian), while to the *centum* group belong Greek, Latin, Germanic, Celtic and Tokharian.

This division-line is the most clearly marked one and it is said that there is no overlapping and no neutral region. These two groups, though mutually exclusive, give us a glimpse of the division of the languages into the Western and the Eastern.

The chief criterion upon which this classification is based is the treatment of the original Indo-European palatal sounds in these two different branches of languages. It has been postulated that the original Indo-European had three series of of gutturals, e.g.,

Palatals— \hat{k} \hat{kh} \hat{g} \hat{gh} , (\hat{n})

Velars— q qh g gh , (\hat{n})

Labio-Velars— q^u q^uh g^u g^uh , (n^u)

These three series of gutturals are not, however, found in any Indo-European dialects known to us. In the *satəm* group the velars coincide with the labio-velars and in the *centum* group they coincide with the palatals, but their treatment is quite different in these two groups. In the *satəm* group the IE palatals have developed into a sibilant (i.e. into *ś* or *s* sounds), while in the *centum* they have become velars (i.e. *k*-sounds). These two divisions are named after the word "hundred" which goes right through many Indo-European languages. The first group is called the *satəm* group after the word hundred as found in Avestan, while the second group is called the *centum* group after the word hundred as found in Latin. This division is done for the sake of convenience. The words for hundred in these two groups together with their Indo-European form are given in the following :

IE **k̑ntom*

East (represented by s)	West (represented by k)
<i>Satəm</i> group	<i>Centum</i> group
1. Indo-Iranian : OIA. <i>śatám</i> AV. <i>satəm</i> OP. <i>θata-guš</i>	5. Greek : <i>he-katon</i> 6. Latin ; <i>centum</i> 7. Germanic : Goth. (<i>k</i>) <i>hund</i> (<i>xund</i>), OHG. <i>hunt</i> , MG. <i>hund-ert</i> , AS & Eng. <i>hundred</i> .
2. Albanian : cf. <i>vis</i> 'place', Lat. <i>vīcus</i> 'village'.	8. Celtic : Old Irish <i>cét</i> , Welsh <i>cant</i>
3. Armenian : cf. <i>aseln</i> 'needle' Lat. <i>acus</i> .	9. Tokharian : Kuchaeen <i>kant(e)/kand(h)</i>
4. Balto-Slavic : Lith <i>szim̃tas</i> (<i>šim̃tas</i>) OChSl. <i>sūto</i> , Russ. <i>sto</i> .	

In a similar way the word for 'ten' also shows the same treatment of IE palatal sounds.

IE **deḱm̃* (ten) : OIA. *daśa*, Av. *dasa*, ModP. *dah*, Arm. *tasn*, Alb. *dhjetë*, Lith. *dešimt*, OChSl. *dese-tū* (*dešet*), Russ. *desjati*, Czech, *deset*, Gk. *deka*, Lat.

decem, Fr. *dix*, It. *dieci*, Sp. *diez*, Port. *der*, Goth. *taihun*, OHG. *Zehn*, MG. *Zehn* (*tsën*), AS. *tien*, Eng. *ten*, Irish. *deich* (*deç*), Bret. *dek*, Tokh. *šāk*.

III. HITTITE AND ITS RELATION WITH SANSKRIT

§14 The discovery of Hittite

The discovery of Hittite towards the end of the first decade of the twentieth century helps us to establish a relationship between Hittite and Indo-European. It has also been suggested that Hittite is the cousin (or sister) language to the Primitive Indo-European, and therefore, instead of calling it Indo-European, it should be designated as Indo-Hittite¹. It is a discovery of the present century from a mass of cuneiform script recovered from the province of Cappadocia in Asia Minor. The records mostly belong to the Archives of the Hittite Empire mentioned in the old Testament. The documents dated between 2000-1350 B.C.

The discovery of Hittite is interesting.² In the Turkish village of Bogaz-köy (or Boghaz-köi) ninety miles east of Ankara in Asia Minor, some sorts of preliminary excavations had been made in 1893. It was followed by numerous successive excavations from 1905 till 1907 which led to the discovery of a mass of inscriptions in Summerian and Akkadian cuneiform script written in a language which was then quite unknown to the scholarly world. After a careful perusal of these texts, it has been found that these are the records of the Hittites and the name of the language is Hittite. It has derived its name from the name of the capital which was known as Hatti or Khatti. It is also otherwise known as Kanesian, because in one of the passages of the texts, the name Kanes or the 'singer of Kanes' occurs. There are some who want to designate it as 'Nāsili', the language of Nāsas.

I. E.H. Sturtevant, The Indo-Hittite Hypothesis, Language, 38, 1962, pp. 105-110.

2. For details, see E.H. Sturtevant, A Comparative Grammar of Hittite Language.

There are four stages of the study of Hittite language :—

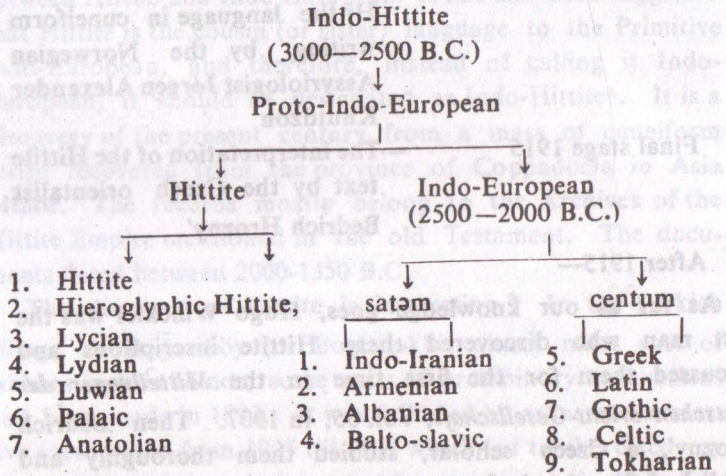
- A. Anatolian off-shoot 1821—The early stage was connected with the study of the Lycian language which intimately leads to
- B. Intermediary stage 1880—Hieroglyphic Hittite now known as Hieroglyphic Luwian.
- C. Mature stage 1902 —The establishment of the Hittite language in cuneiform writing by the Norwegian Assyriologist Jørgen Alexander Knudtzon
- D. Final stage 1915 —The interpretation of the Hittite text by the Czech orientalist Bedřich Hrozný.
- E. After 1915—

As far as our knowledge goes, Hugo Winckler was the first man who discovered these Hittite inscriptions and discussed them for the first time in the *Mitteilungen der deutschen orient-Gesellschaft*, Vol. 35, in 1907. Then Bedřich Hrozný, a Czech scholar, studied them thoroughly and published them in his *Die sprache der Hittier*, Leipzig, 1917, where he tried to establish that these Hittite texts perhaps possess the oldest writings of the Indo-European family of languages. The same trend is followed by C.J.S. Marstrand, a Norwegian scholar, in his *Caractère indo-européen de la langue hittite*, Christiania, Oslo, 1918, and in 1922 Johannes Friedrich gave a detailed study of the Hittite language in his *Die Hethitische Sprache* (ZDMG, new series, Vol I, part 2, Leipzig, 1922, pp. 153-173.)

§15. The Postulation of Indo-Hittite

At first Hittite was recognised as a distinct branch of Indo-European, a branch which, owing to considerable influences of Summerian and Akkadian languages, developed

many peculiarities giving it an apparently non-Indo-European character. But later researches have almost conclusively shown that Hittite presents features older than any other Indo-European languages. In fact, Hittite does not stand in the same position as Greek, Sanskrit etc., but should be co-ordinated to Proto-Indo-European. Considering this, the family of IE languages has now been named as Indo-Hittite with the following ramification, and the date of Indo-Hittite tie can be placed between 3000—2500 B.C.



After the establishment of Indo-Hittite tie, the origin of Sanskrit can be traced from Indo-Hittite as the common vocabularies between Hittite and Sanskrit will show. For example,

Ht. *estsi*, OIA. *asti*, Gk. *ésti*, Lat. *est*, IH. **esti*.

Ht. *estmi*, OIA. *asmi*, Gk. *eimí*, IH. **esmi*.

Ht. *esḫar*, OIA. *asṛk*, Gk. *ēar*, *ēar* (Hes.).

Ht. *edmi*, OIA. *admi*, Gk. *edomai*, Lat. *edō*.

Ht. *nebis*, OIA. *nabhas*, Gk. *nēphos*, Lat. *nebula*, OChSI *nebo*.

Ht. *ḫastai*, OIA. *asthi*, Gk. *osteon*, Lat. *os* (bone).

Ht. *pra*, OIA. *pra*, Av. *fra*, Gk. *pro*, Lat. *pro*.

In Hittite documents we have a marriage contract between a Hittite prince and a Mitanni princess, as well as a description of

a Mitanni prince on horse-racing. The marriage documents contain the name of some gods which appear only in IE, e.g.,

- (i) *Intara → Indara → Indra—the biggest god in the RV and a very inferior demon in Avesta.
- (ii) Mitara → Mitra, Av. Miθra
- (iii) Nasatina → Nāsatyānām → (Nāsatya).
- (iv) Uruvanara → Varuna.

This shows that the Mitannian people came from an Indo-Iranian stock, probably from an Indo-Aryan stock. That the Mitannians were not merely Indo-Iranian but specially Indo-Aryan is proved by the term “*oika-vartan*”, OIA. *eka-vartana*, Gk. *oino*- > Eng. *one*. The use of this word, therefore, indicates that people using that term or language belong to a proto-Indo-Aryan and not to the Indo-Iranian stock.

§16. The discovery of Laryngeal Theory

After the discovery of Hittite the controversy of the laryngeal theory started. It had its germ in the last century. The earliest history of laryngeal theory could be traced from Saussure. In 1878, the Swiss linguist Ferdinand de Saussure (1857-1913), the structuralist, later to be known as the father of modern linguistics, wrote his doctoral dissertation on the IE vowel system. In his book, entitled *Mémoire sur la système primitif des voyelles dans les langues indo-européennes*, the germ of laryngeal theory was first shown by him in order “to explain the irregular occurrence of the schwa sound in Indo-Europeans.” Saussure has not used the word ‘laryngeal’ but “*coefficient sonantique*” to explain those irregularities. He was puzzled by the fact that the schwa (ə) showed up in a set of correspondences that was irregular, with all corresponding members showing the loss of a sound (IE *eḱ* > *i*, *eḡ* > *u*, *er* > *r* in Sanskrit, *ē* > *ə*). Saussure advocated in his theory that the discrepancy in different forms of certain words in the various IE languages could not be solved unless we assume that some guttural sounds (=laryngeal) were lost in IE

languages which were present in the Proto-Indo-European. Saussure assumed one or more laryngeals in Proto-IE. But they all disappeared in the known IE languages. By comparison and internal reconstruction, Saussure set up the hypothesis that something must have disappeared in \bar{e} to yield a . Saussure thinks that this lost sound must have been a laryngeal of the present day and the change of $\bar{e} > a$ is like this :

$$[e + (h)] > \bar{e} > a.$$

The man who for the first time used the word 'laryngeal', though not expounded it later on, was Karl Brugmann. In 1886 the first volume of his *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen* appeared. And in this book, while describing the IE sound system, he mentions :

"To these [sounds] is probably further to be added the spiritus lenis, a laryngeal explosive, e.g. Indg. *ésti* 'is', Gk. *ésti*. In the following paragraphs we shall indicate this sound only in Greek words." (Eng. Tr of VGIS, p. 19).

Though Brugmann has never elaborated this sound as promised, and later on never dealt with in his *Kurze vergleichende Grammatik der indogermanischen Sprachen*, 1904, but that was the first utterance of the word. As Brugmann has never talked much about the laryngeals, the history of laryngeal theory does not record his name.

It was the Danish scholar Hermann Möller (1850-1923) who actually gave it a further new shape. In 1878 Möller supported the vowel-alteration theory of Schleicher in relation to Ablaut which was further explained by Saussure. With this background, he wrote his *Semitisch und Indogermanisch* in 1906, a comparative study between Semitic and Indo-European, where he used the term 'laryngeal'. The word laryngeal is borrowed from Semitic language. It means a sound phonated in the larynx which is 'a muscular and cartilaginous structure lined with mucous membrane at the upper part of the trachea in man, in which the vocal cords are located.' It is also otherwise known as glottal [h] and the glottal [ʔ].

This theory was not widely accepted until the Polish scholar Jerry Kurylowicz and the French scholar Albert L. M. Cuny announced their discovery in 1927. Kurylowicz in his article "à indo-européen et *h* hittite" published in *Symbolae Grammaticae in honorem Ioannis Rozwadowski*, vol. I, Cracow, 1927, pp. 95-104, and Cuny in his article "Réflexions sur le type $\chi\rho\eta$ ($\zeta\eta\nu$) et le type $\eta'\chi\acute{\omega}$ " in the same volume pp. 85-94, and specially at p. 94 foot note 1, pointed out that the consonant *h* actually occurs in Hittite. And this Hittite *h* is nothing but laryngeal which Saussure presupposes as "coefficient sonantique" for Proto-Indo-European which was lost in other IE-languages. In fact, in Hittite an *h* sound was presented in cases where a laryngeal would have been proper. For example,

Hitt. *hanti*, OIA. *anti*, Gk. *anti*, Lat. *ante*, Eng. *anti*.

Hitt. *pahhur*, OIA. *pāvaka* (<*pū* to purify), Gk. *pūr*, Eng. *pyre*.

Kurylowicz was the first who explained the phenomenon from the point of view of Hittite.

The scholar who wrote quite a lot about the Hittite and the laryngeals was Edgar. H. Sturtevant. From 1927 to 1942 he wrote several articles, where he sometimes tacitly accepted as well as rejected the laryngeal theory. But in 1942 in his *The Indo-Hittite Laryngeals*, he practically accepted and established the laryngeal theory probably under the influence of Edward Sapir. Since then it has become a moot point of discussion among the Indo-Europeanists. Some accept it, some reject it, and some use it whenever they like it. A fuller discussion will be available in the *Evidence for Laryngeals* edited by Werner Winter (Mouton & Co. 1965).

§ 17. Number of laryngeal

Some Indo-Europeanists assume that there were three laryngeals, others consider a fourth one. Various signs and symbols are used to indicate them. Some use H_1 , H_2 , H_3 , H_4 ; others use \mathfrak{a}_1 , \mathfrak{a}_2 , \mathfrak{a}_3 , \mathfrak{a}_4 ; some prefer $|'$, $|''$, $|x|$, $|y|$, others consider χ , γ , χ' , γ' . These differences can be summed up in the following table given by E. Polomé (vide EL, p. 21).

Phonetic features				Reflexes in Hittite	Influence on contiguous PIE [e/]	corresponding symbols	
voice	point of articu- lation	Articu- latory type	Timber			Peder- son	Kury- lowicz
/p/	glo- ttal	stop	pala- tal velar	ϕ	none a-co- lora- tion	H ₂	ə ₁
/ʔ/							ə ₄
/x/	velar	(post) spirant	-	-h̥h- -h-	none	H ₁	ə ₂
/ɣ/							ə ₃ *

* except for the O-coloration.

§18 Examples with four laryngeals

Although of the four laryngeals postulated in IH, Hittite has really preserved only one of them, namely, *h* (=H₄), whereas intervocally *h̥h* (=H₃) is also assumed orthographically. However, those who accept four laryngeals, give the following examples for their justification.

1. Laryngeal H₁

IH*H₁epo > IE*apo, Ht. *apa*, OIA. *apa*, Gk. *apo*.

IH*steH₁ > IE*st(h)a, Ht. *ta-*, OIA. *sthā*, Gk. *stā*.

IH*ieH₁ > IE*iā, Ht. *ya-*, OIA. *yā*.

2. Laryngeal H₂

IH*eH₂s- > IE*ēs-, Ht. *estsi*, OIA. *āste*, Gk. *hestai*.

IH*eH₂p > IE*ēp, Ht. *eptsi* (begins), OIA. *āp-noti* (gets),
Old Lat. *co-epi* (I began).

IH*iH₂p > IE*ip-, Ht. *eptsi*, OIA. *ipsati*.

3. Laryngeal H₃

IH*H₃enti > IE*anti, Ht. *hanti*, OIA. *anti*, Gk. *anti*.

IH*H₃erġ > IE*arġ-, Ht. *hargis*, OIA. *arjunah*, Gk. *argos*.

IH*peH₃u > IE*pāu, Ht. *pahhur*, OIA. *pāvakah*, Gk. *pūr*.

4. Laryngeal H₄

IH*meH₄ > IE*mā, Ht. *mehhur* (time), OIA. *mā* (measure),
Gk. *mētis*.

IH*eġH₄ > IE*eġh- > Ht. *uk*, OIA. *aham*, Gk. *egōn*
(<*eġoH₄).

§19. The Laryngeal Theory

It is owing to the laryngeals, some scholars want to prove that the laryngeals have some effects on IE languages, and these effects subsequently came to be known as 'laryngeal theory'. The theory has formulated certain rules which affect the IE languages. Some of them are as follows :

I. IH had only simple short vowels, and the development of long vowels in IE is due to the effect of laryngeals ; i.e.,

IH vowels + laryngeal = IE long vowels ; e.g.,

$IH^*steH_1 > IE^*st(h)\bar{a} > OIA. sth\bar{a}-, Gk. st\bar{a}, Ht. ta-$

$IH^*i\bar{e}H_1 > IE^*i\bar{a} > OIA. y\bar{a}, Ht. i\bar{a}.$

$IH^*peH_3u > IE^*p\bar{a}u > OIA. p\bar{a}vaka, Gk. p\bar{u}r, Ht. pa\check{h}hur.$

$IH^*meH_4 > IE^*m\bar{e} > OIA. m\bar{a}-tr\bar{a}, Gk. m\bar{e}tis (skill), Lat. m\bar{e}tior, Ht. me\check{h}hur (time).$

$IH^*eH_2s > IE^*\bar{e}s > OIA. \bar{a}ste, Gk. h\bar{e}stai (sits), Ht. estsi (sits).$

$IH^*doH_2 > IE^*d\bar{o} > OIA. dad\bar{a}mi, Gk. did\bar{o}mi, Ht. da\check{h}hi.$

$IH^*poH_2 > IE^*p\bar{o} > OIA. p\bar{a}-nam, Gk. p\bar{o}ma, Lat. p\bar{o}tor, Ht. po-,$

$IH^*pipH_4o > IE^*pib\bar{o} > OIA. pib\bar{a}mi, Lat. bib\bar{o}, Ht. pipo-.$

(a) This is applicable in the case of the secondary short vowels which also became long with the combination of laryngeals ; i.e.,

$i, u, \check{r}, \check{l}, \check{n}, \check{q} + \text{laryngeals} = \bar{i}, \bar{u}, \bar{r}, \bar{l}, \bar{n}, \bar{q} ; \text{e.g.,}$

$IH^*iH_2p > IE^*i\bar{p} > OIA. i\bar{p}sati, Ht. e\check{p}si.$

$IH^*dH_4uH_3- > IE^*dh\bar{u} > OIA. dh\bar{u}ma\check{h}, Gk. th\bar{u}mos, Ht. du\check{h}h-$

$IH^*t\check{r}H_3 > IE^*t\check{r} > OIA. (ut)t\bar{i}r\check{n}a\check{h}, Ht. tar\check{h}h-$

$IH^*p\check{l}H_3 > IE^*p\check{l} > OIA. p\bar{u}r\check{n}a\check{h}, Ht. pal\check{h}i.$

$IH^*d\check{n}H_3 > IE^*d\check{n} > OIA. d\bar{a}nta\check{h}, Gk. dm\bar{a}tos, Ht. damastsi.$

$IH^*s\check{n}H_3 > IH^*s\check{n} > OIA. s\bar{a}ta\check{h}, Ht. san\check{h}h-$

II. The IE aspirates are developed in combination with the IH non-aspirates plus laryngeals ; e.g.,

$IH^*dH_4uH_3 > IE^*dh\bar{u} > OIA. dh\bar{u}ma\check{h}, Gk. th\bar{u}mos, Ht. du\check{h}h-$

$IH^*siH_1e > IE^*sth\bar{a}- > OIA. sth\bar{a}n\check{q}m, Gk. statos, Lat. stare, Ht. sta-$

$IH^*e\check{g}H_4 > IE^*e\check{g}h-om > OIA. aham, Gk. eg\bar{o}n, Lat. ego, Ht. uk.$

III. The short and long treatment of cognate IE languages can also be solved by means of laryngeal; e.g., OIA. *jīvas*, Gk. *bīos* for which we have IE. $g^h i u o s$ and IH. $g^h i H_2 u o s$ respectively.

IV. Sometimes laryngeal can solve the double treatment of IE i in Greek. It seems that IE i has two developments in Greek. It becomes z and aspirated h in Greek. For example, IE. $i u g o m >$ Gk. *zugōn*, OIA. *yugam* and IE. $i o s >$ Gk. *hōs*, OIA. *yah*. The laryngeal is postulated to solve this anomaly:

- (i) IH laryngeal + semi-vowels = Gk. aspirated h , and,
- (ii) IH semi-vowels = Gk. z .

V. On the basis of laryngeal sounds a triliteral theory was established. The theory says that the original Indo-European roots consisted of consonant-vowel-consonant the first consonant of which is sometimes identified on the basis of evidence discovered in Hittite, to be a laryngeal, which disappeared in other IE branches (Kurylowicz).

The main contribution of the laryngeal theory is to explain the phonetic irregularities of the cognate IE languages. These phonetic irregularities can be solved by means of laryngeal theory. For example, OIA. has *aham*, whereas, Gk. has *egōn*, and for the Gk. long \bar{o} , laryngeal H_4 is postulated, e.g., IH. $e g o H_4 m$ which makes \bar{o} long in Gk. and for OIA. h the IH. $e g H_4 o m$ is postulated.

Though laryngeal theory is not accepted by all, it has some implications on the cognate IE languages.

§ 20. Salient features of Indo-Hittite

The discovery of Hittite in the present century has helped us quite a lot to establish the relationship of Indo-Hittite and Indo-European.

On the whole, the structure of Indo-Hittite is simpler than Indo-European which is, in fact, very elaborate and complex. The phonology and morphology of Indo-Hittite (= IH) is rather not complicated and much simpler than Sanskrit, Greek,

Latin and others. Some of the noteworthy grammatical features of Hittite are given below to show the structure of Indo-Hittite.

1. The Sound System of Indo-Hittite

1. Vowels

The sound system of Indo-Hittite is very simple. It had *a, i, u, e* and *o* only. The long vowels and sonants of Indo-European are not found in Indo-Hittite. In fact, the long vowels in IE are the results of a laryngeal sound preceded or followed; e.g.,

IH. eH_3s > Ht. *es*, IE* $\tilde{e}s$ > OIA. *āste*, Gk. *hēstai*.

IH. peH_3uer > Ht. *paḥhur*, IE* $pāuer$ > OIA. *pāva-ka*, Gk. *pūr* (cf. OIA. *pūrta*).

2. Consonants

The consonantal system of IH is reconstructed as follows :

	voiceless		voiced		nasals
	unaspirate	aspirate	unaspirate	aspirate	
Velars	q q ^u	qh q ^u h	g g ^u	gh g ^u h	(ñ) (ñ ^u)
Dentals	t	th	d	dh	n
Labials	p	ph	b	bh	m
Laryngeal spirants		χ (= h) χ' (= h̥h)		γ γ'	
Sibilants	s		z		
Liquids		r l			
Semi-vowels	î (= j, y)		ʒ (= v w)		

Laryngeals.

It is postulated that IH had three or four laryngeal sounds (both voiceless and voiced), but these sounds were totally lost

in Indo-European. But from the Hittite texts it appears that Hittite has really one *h*.

Indo-Hittite short vowels + *h* + consonant show long vowel + consonant in IE., e.g., Ht. *meh̄yeni* > IE. *mēt-* > OIA. *mātram*, Gk. *mētron*

Declensions.

The declension system of IH is not elaborate and is characterised by gender, number, cases and case-endings, and declension. There are only two genders : masculine and neuter as found in noun, adjective and pronoun. The feminine is a later development in IE out of masculine and the lack of the feminine gender in Hittite is the striking difference from the IE system. The neuter is distinguished from the masculine only in the nominative and accusative.

There are only three numbers : singular, dual and plural as in IE. But the dual is extremely rare in IH as in IE. The plural is not even fully developed in IH.

There are only six cases, locative being absent or merged with dative, out of seven or eight in IE and declined by case-terminations. The Ht. case-endings are indicated below :

	Singular	Plural
Nom.	-š (-s)	-eš, -uš, -aš
Acc.	-n	-uš
Inst.	-it	-it
Dat/ Loc	-i, -a	-aš
Abl.	-az(a)	-az(a)
Gen.	-aš, (-s)	-aš

Declension of *aruna*, 'sea'—

	Singular		Plural
	IH.	Ht.	
Nom.	*orunos > arunas		IH. esxées > Ht. eshes
Acc.	*orunom > arunam		arunus Ht. hasus
Ins.			
Dat. -Loc.	*orunōi > aruni (aruna)		same as sg.
Abl.	*oruno-tos > arunaz < *arunats		
Gen.	*orunos > arunas		same as sg.

Declension of *at ta*, 'father', *anna*, 'mother'

	<i>Singular</i>	<i>Plural</i>
Nom.	<i>attas, annas</i>	<i>addus, annis</i> (<i>addas, attes</i>)
Acc.	<i>attan</i>	<i>attus, annus</i>
Inst.		
Dat.-Loc.	<i>atti, anni</i>	<i>attas</i>
Abl.		
Gen.	<i>attas, annas</i>	

Heteroclitlic declension

IH is also characterised by a type of declension known as Heterocclisis. It is a consonantal declension whose stem vary between *n* and *r*. This heteroclitic stem is found in OIA and

also partly in Greek and very rarely in other IE languages. For example,

IH. *uēt* : *ueter* > Ht. *uatar*, OIA. *udra* < *udar*
uētes : *uēten* > Ht. *uatan*, OIA. *udan*.

*Declension of *ueter*

Nom : *uatar* < IH. *uodor*, cf. OIA. *ahar*
 Acc. : *do*
 Ins : *uētenet*
 Dat : *uēteni* < IH. *uēdenei*/*uēdeni*
 Abl : *uētenaz*
 Gen : *uētenas* < IH. *uēdenos*, cf. OIA. *ahnah*.

Pronoun

The IH pronouns are very much close to IE, particularly to Latin ; e.g.,

First Person

	Singular	Plural
Nom.	<i>uk</i> < IH. * <i>eghom</i> , Lat. <i>ego</i>	<i>ues</i> < IH. * <i>ues</i>
Acc.	<i>ammuk</i> < IH. * <i>ns-me</i>	<i>anzās</i>
Ins.		
Dat.	<i>ammuk</i>	<i>anzās</i>
Abl.	<i>ammetaz</i> < IH. * <i>ns-me</i>	<i>anzedaz</i>
Gen.	<i>ammel</i> < IH. * <i>ns-me</i>	<i>anzēl</i>

Second Person

	Singular	Plural
Nom.	<i>zik</i>	<i>sumēs</i>
Acc.	<i>tuk</i>	<i>sumās</i>
Ins.		
Dat.	<i>tuk</i>	<i>sumās</i>
Abl.	<i>tuēdaz</i> <i>tuetaz</i>	<i>sumēdaz</i>
Gen.	<i>tuēl</i>	<i>sumēl</i>

Ht. *kuis*, *kuid* (which), Lat. *quis*, *quid*.

Verb system

From the nature of the Hittite verbal pattern it can be said that IH verbal system was very simple and not as elaborate as in IE. The important difference from IE is this that IH had two tenses—present and past (preterite), and two moods—indicative and imperative. The conjugational pattern is characterised by *-mi* and *-hi* conjugation. The root conjugation is frequently found in IH than in IE, where it is eliminated rapidly.

The Conjugation of *es*, 'to be'

I. The *-mi* conjugation

Present

A. Indicative

Singular

Plural

- | | | |
|-----------------|--|--|
| 1. <i>es-mi</i> | <IH. * <i>esmi</i> > IE * <i>esmi</i> | |
| 2. <i>es-zi</i> | <IH. * <i>essi</i> > IE * <i>esi</i> | |
| 3. <i>es-zi</i> | <i>asanzi</i> <IH. * <i>esonti</i> > IE * <i>sonti</i> | |

Past :

- | | | |
|----------------|---|--|
| 1. <i>esun</i> | <IH. * <i>esm</i> > IE. * <i>esm</i> | <i>esun</i> <IH. * <i>esun</i>
<i>esten</i> <IH. * <i>esten</i>
<i>esir</i> <IH. * <i>esrr</i> |
| 2. <i>esta</i> | | |
| 3. <i>esta</i> | <IH. * <i>est</i> > IE *(<i>e</i>) <i>est</i> | |

B. Imperative

- | | | |
|----------------|---------------------------------------|--|
| 1. | | <i>esten</i> <IH. * <i>esten</i>
<i>asandu</i> <IH. * <i>esontu</i> |
| 2. <i>es</i> | <IH. * <i>es</i> > IE. * <i>esdhi</i> | |
| 3. <i>esdu</i> | <IH. * <i>estu</i> | |

Present participle :

assanza (<*asants*>) <IH. **esonts*> IE * *sonts*.

II. The *hi*-Conjunction

- | | |
|---------------------------------------|---|
| 1. <i>sakhi</i> | <i>sak</i> <i>geni</i>
<i>sak-teni</i>
<i>sakanzi</i> < IH * <i>sokonti</i> |
| 2. <i>sakti</i> < IH. * <i>sokthe</i> | |
| 3. <i>saki</i> < IH. * <i>soke</i> | |

The conjugation of the root 'yā, to go'

A. Indicative

Present : Sing.

Pl.

- | | |
|-------------------------------------|--|
| 1. <i>īami</i> cf. Skt. <i>yāmi</i> | <i>īaṇi</i> |
| 2. <i>īesi</i> cf. Skt. <i>yāsi</i> | <i>īaṇi</i> (cf. Skt. <i>yāthana</i>) |
| 3. <i>īezi</i> cf. Skt. <i>yāti</i> | <i>īenzi</i> . (cf. <i>yānti</i>) |

Past : Sing.

Pl.

- | | |
|--------------------------------|----------------------------------|
| 1. <i>īanun</i> | 1. <i>īaṇ</i> |
| 2. <i>īet</i> | 2. <i>īaten</i> Skt. <i>ayāt</i> |
| 3. <i>īet</i> Skt. <i>ayāt</i> | 3. <i>īer</i> Skt. <i>ayuh</i> |

B. Imperative :

- | | |
|-------------------------------------|---------------------------------------|
| 2. <i>īa</i> | 2. × |
| 3. <i>īatu</i> cf. Skt. <i>yātu</i> | 3. <i>īentu</i> cf. Skt. <i>yāntu</i> |

§21. A Short Description of IE languages

In 1866 August Schleicher in his *Compendium der vergleichenden Grammatik der indogermanischen Sprachen* propounded his well-known *Stammbaumtheorie* for the classification of IE languages. In his opinion the IE language was first divided into two divisions : Slavo-Germanic and Aryo-Greco-Italo-Celtic. The former is again sub-divided into Slavo-Lithuanian and Germanic and latter into Aryan and Greco-Italo-Celtic which was again divided into Greek and Italo-Celtic, and so on. This theory was not found cogent, and hence gradually discarded. Later on in 1872, Johannes Schmidt in his *Die Verwandtschaftsverhältnisse der indogermanischen Sprachen* stated his wave-theory by which the isophonic and isoglossic discrepancies between the languages were explained. But after Schmidt's theory the division of IE into *centum* and *satəm* was followed on the basis of the treatment of the IE palatal sound *k̑* which actually helped his wave-theory. According to this theory the IE language is grouped as follows :

Indo-European

Centum-group

1. Greek,
2. Italic (Latin)
3. Germanic/Teutonic (Gothic)
4. Celtic
5. Tokharian

Satəm-group

6. Balto-Slavic
7. Armenian
8. Albanian
9. Indo-Iranian

The two other languages Thraco-Phrygian and Illyrian are still disputed. Some include them in the IE, some exclude them from IE. Some equate Illyrian with Albanian, some consider Phrygian as one of the dialects of Greek. Below a short description of these IE languages is given :

I. GREEK

Of the *centum*-group of languages, Greek is the most important branch of IE family that has preserved a great deal of the structure of the parent language. Greek has preserved the IE vowels more faithfully than any other branch, i.e., the IE vowels \tilde{a} , \tilde{e} , \tilde{o} remain distinct and so also the diphthongs. Like Vedic, it has retained the primitive accent as well as the primitive declension and the conjugation. The oldest records of the Greeks are the Homeric epics—Illiad and Odyssey—compiled in the 8th cent B.C. It has a very good classical literature ; in fact, the richest before the modern times and this literature and philosophy are at the basis of modern European civilisation. Not being the language of an empire, Greek had little opportunity to spread outside its immediate surroundings including the Aegean Island and the coastal region of Asia minor. Greek has, therefore, not been a prolific branch. Its only descendant at present time is modern Greek. Old Greek is known to have its several dialects of which four are important : (i) Attic, (ii) Doric, (iii) Aeolic and (iv) Ionic. Greek literature is mostly written in Attic. Doric is known from some inscriptions. The main difference between the two lies in the treatment of the IE long vowels \tilde{a} . In Attic it has become \tilde{e} , whereas in Doric, it has become \tilde{a} , e.g., IE. **mētēr*—> Att. *mētēr*, Doric *mātēr*.

The language of the Homeric poems is the old Ionic, also called Epic language, and the language of Herodotus and Hippocrates is the new Ionic.

The original name of the Greek language is *Hellenic*, the language of the Hellenes who were the original inhabitants of Greece. The name Greek has come from the Roman name *Graeci*. When the Greek people settled in Southern Italy,

which was then known as *Magna Graecia*, the name Hellenic was replaced by Greek.

Grammatically Greek and Sanskrit are very similar. The following Greek sentence translated into Sanskrit will reveal the fact.

Gk. οἱ τὸν γε πρὸς ἄστὺ φέρον
[Iliad XIII. 538.]

hōi tón ge protì ástu phéron.

Skt. te tam ha prati vāstu abharan.

They him indeed towards city bore

Eng. They indeed bore him to the city.

The Greek has the following sound system :

a, i, u, e, ē, o, ō, / ai, ei, oi, au, eu, ou / āi, ēi, ōi, āu, ēu, ōu /
k, x, g, / t, θ, d, n / p, φ, b, m / r l / s z / ks (ξ), ps (ψ) /

The Greek is very similar to Sanskrit in respect of accent, Sandhi, declension and conjugation.

II THE ITALIC (Latin)

The Italic branch was originally confined to Italy proper and it was represented by Latin mainly and a few other dialects of which the two Oscan and Umbrin were of some importance. Before the beginning of the Christian era, these two languages and other non-Indo-European languages spoken in Italy were totally supplanted by Latin which was originally the dialect of Latine, the province of which Rome was the capital city. With the growth of the power of Rome and of the Roman empire, Latin became not only the supreme language of Italy, but also became the provincial language over the entire southern Europe from Portugal in the west up to Bulcan in the east. Latin has a good classical literature and in this respect it comes third in order of merit among the IE branches. Latin, in course of time, was split up into different local dialects out of which had sprung the modern Italic (also called Roumance) languages, such as, Portuguese, Spanish, French, Italian and Roumanian.

The oldest document of the Italic branch dates from the 7th cent. B.C. It is the Praenestine fibula, *Manios med fhefhaked Numasioi*. In the 6th cent. B.C. we have the fragmentary inscriptions in Latin on the *lapis niger* in the Roman Forum.

The Latin literature has several periods :

300-82 B.C. Old Latin : Comedies of Plautus.

81B.C.-14 A.D. Classical Latin : Caesar, Cicero, till Augustus.

14-117 A.D. Silver Latin : From Tiberius to Trajan.

117-180 A.D. Archaistic Latin.

180 A.D.—Vulgar Latin.

The Latin sound system is as follows :

a, e, i, u (y) / *ae* (= ē), *oe* (= ē), *ae* (= ē) / *c, qu, g* / *t, d, n* /
p, f, b, m / *j, r, l, v* / *s, h* /

Like Greek, Latin is also similar to Sanskrit in grammatical structure.

III. GERMANIC / or TEUTONIC

The Germanic branch is represented by the languages spoken over a very large area in north-western Europe. The modern languages belonging to the Germanic group are English, Dutch, Danish, Norwegian, Swedish, Icelandic. Originally the Germanic branch had three sharply divided groups, called East Germanic, North Germanic and West Germanic. The East Germanic branch is practically dead now, but it has preserved for us the oldest records of Germanic branch. It is the translation of the new Testament made by Arian Bishop Wulfilas (311-383 A.D.) in Gothic which was his native language.

Western Germanic is represented by the other ones, namely, English, Dutch and Germany.

North Germany includes Danish, Norwegian, Swedish and Icelandic.

The most important factor in Gothic as also in Germanic branch is Grimm's Law which is again supplemented by Verner's Law. In the declension there developed the so-called weak declension and in the verbal system the development of the preterite of weak verbs was the most marked one. The

reduplicated perfect is lost, and the use of the old perfect as a preterite is a new development. In syntax, the Gothic language was much influenced by Greek.

Though developed from IE, Gothic has a complicated sound system which is given below :

I. Vowels

	Simple					Diphthongs		
Short	<i>a</i>	<i>i</i>	<i>u</i>	<i>ai</i> (= <i>e</i>)	<i>au</i> (= <i>o</i>)			
Long	<i>ā</i>	<i>ei</i> (= <i>ī</i>)	<i>ū</i>	<i>ai</i> (= <i>ē</i>), <i>ē</i>	<i>au</i> (= <i>ō</i>), <i>ō</i>	<i>ái</i> (= <i>āi</i>)	<i>áu</i> (= <i>āu</i>)	<i>iu</i>

II. Consonants

	Voiceless		Voiced		
	unaspi- rated	aspirated (spirant)	unaspi- rated	aspirated (spirant)	nasals
Gutturals	<i>k</i>	<i>x</i>	<i>g</i>		<i>gg, g</i>
Dentals	<i>t</i>	<i>þ</i>	<i>d</i>		<i>n</i>
Labials	<i>p, (q)</i>	<i>f, hv</i>	<i>b</i>		<i>m</i>
Semi-vowels				<i>j, l, r, w,</i>	
Sibilants		<i>s</i>		<i>z</i>	
Aspiration				<i>h</i>	

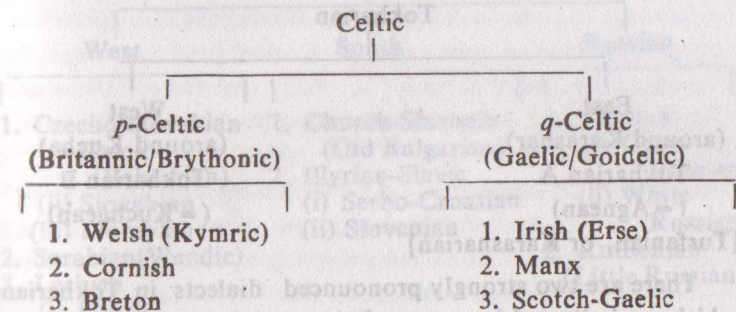
In comparison with Sanskrit, Gothic has preserved less IE characteristics than even Greek and Latin. The IE accent is fully preserved in Sanskrit and Greek, but not in Gothic. Though we presume that in primitive Germanic language there was an accent which was partly pitch and partly stress (of Vermer's Law), the Gothic text is not accented nor even Latin. It is owing to the changes of IE vowels into Gothic, the IE

ablaut system in Gothic became very much blurred. The declension and conjugation systems are also not complicated in Gothic.

IV. CELTIC

Celtic was once the most widely spread branches of IE languages. It was spoken over the entire western Europe, but in historical times it had continually given ground to the Italic and Germanic branches. Now, it is represented by only Irish in Ireland and a few dialects in Great Britain (such as, Scotch Highland dialect and Welsh), and by a few dialects spoken on the southern coast of France (such as, Breton). Of these languages only Irish has some literature, but its oldest records do not go back beyond 8th century A.D.

This language is mainly divided into two groups: the *q*-Celtic and *p*-Celtic. This division is based on the treatment of *q*- or *k*-sound represented in one group as *p*-sound; e.g., IE**penq²e* > Welsh *pump*, Irish *coic*, OIA. *pañca*, Gk. *pentē*. The languages belonging to these two groups are the following:



V. TOKHARIAN

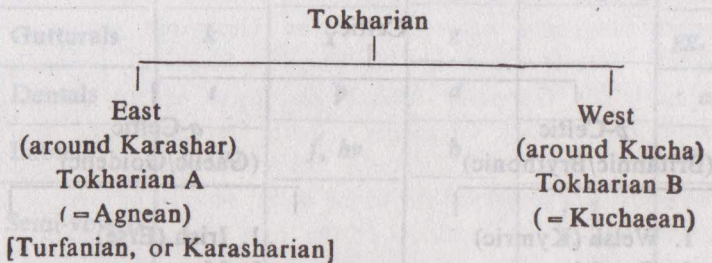
Linguistically Tokharian belongs to the *centum* group, but geographically to the eastern block of the Asiatic divisions of the Indo-European family of languages. It is a discovery of the present century from some of the documents recovered from Chinese Turkistan. It has a close similarity with the Italic and Celtic. The name Tokharian is given to this language from a reference 'Tokhri' (or *Toxri*), Gk. *Toxapoi*, Chinese

Tu-hu-la, Skt. Tokhāra, found in some of the texts of the eastern dialects. In the Mahābhārata, Buddhist literature and in the Āyurveda, the name Tokhāra is found.

This Tokharian is now an extinct IE language which was spoken in Central Asia round about 2nd cent. B.C., when the kingdom was founded after the fall of the Graeco-Bactrian kings. In 7th cent. A.D. this kingdom was destroyed by the Huns. By the 1000 A.D. the Tokharians, a people of once high culture, were completely assimilated with other peoples of Europe.

The earliest literature is dated in the 7th cent. A.D. in the reign of king Suvarnata. It is a literature of medical and Buddhist works found in Chinese Turkistan. But the literature did not flourish beyond 10th cent. A.D. as the language seems to have died out by that time and the entire people lost their identity.

Tokharian language is divided into two distinct groups or dialects which are shown below :



There are two strongly pronounced dialects in Tokharian which are indicated by some scholars as Tokharian "A" and Tokharian "B". Tokharian "A" was the language of the province of Karashar and Tokharian "B" was the language of the people of Kucha.

Though affiliated to IE, Tokharian has five short vowels (*a, i, u, e, o*) and perhaps also a sort of neutral vowel represented by *ā* (= *ə*). It has only voiceless plosives *k, t, p*. The IE *k̂* is represented by *k* (e.g. *kant(e)*, Lat. *centum*).

The declension is largely influenced by post-positions. As

the IE case-terminations have greatly dwindled down, it has practically only a nominative and an oblique case.

In the verbal system, Tokharian has only a present, an imperfect, and a past in a narrative sense. It has subjunctive and optative moods, and also a medio-passive with *-r-*.

VI. BALTO-SLAVIC

The Balto-Slavic (also known as Letto-Slavic) belongs to the *satəm* group of the IE language, its area being the Baltic and Slavonic regions of Europe. Hence the Balto-Slavic branch comprises the two sub-branches—Baltic (or Lettish) and Slavonic.

To the Baltic branch belong (i) Old Prussian (now extinct), (ii) Lithuanian and, (iii) Latvian or Lettish. The last two are the living languages of the Baltic group.

The Slavic branch has many off-shoots. The following table will give a glimpse of it.

Slavic		
West	South	Russian
1. Czecho-Slovakian	1. Church-Slavonic	1. Russian
(i) Czech	(Old Bulgarian)	(i) Great
(Bohemian)	2. Illyrian-Slavic	Russian
(ii) Slovakian	(i) Serbo-Croatian	(ii) White
(iii) Moravian	(ii) Slovenian	Russian
2. Sorabian (Wendic)		2. Ruthenian
3. Lechish		(Little Russian)
(i) Polish		
(ii) Polabish		

The oldest record of Balto-Slavic branch is a translation of the Bible made in Old Bulgarian, also known as Old Church Slavonic, in the 9th century A.D., of the Slavic branch. The names of the chief writers are St. Cyril and Methodius. The modern Bulgarian is different from Old Bulgarian. The full literature of the other languages of the Slavonic group did not start before 12th-13th centuries A.D.

Old Prussian became extinct by the 17th cent. A.D. and is known from a German-Prussian glossary and a Catechism. Lithuanian and Latvian have an extensive literature beginning from the 16th cent. A.D.

The Balto-Slavic branch has preserved one characteristic of the parent language which no other branch has done. In the parent Indo-European language, the so-called tenses had no time-significance, they indicated only the aspect of the action of the verbs. This non-temporal tenses have been preserved (of course with some changes) in the Balto-Slavic branches, particularly in the Slavonic.

VII. ALBANIAN

Albanian also belongs to the *satəm* group of the Indo-European family of languages. Originally they were spoken in Albania, in the area north of the Carpathians, and from there they migrated to their present home on the eastern coast of the Adriatic. At present, it is spoken in the mountaneous region north of Epirus, south of Montenegro, on the eastern side of the Adriatic. Apart from Albania, Albanian is also spoken in Yugoslavia, in the provinces of Kosovo and Metoluja, in Macedonia and Montenegro. In Italy and Greece there are Albanian speaking people. Therefore, this language is spoken by three million people.

It was once supposed that Illyriam also belonged to the Albanian group, but now it has been proved that Albanian should be considered as forming a group by itself. It has been decided that Illyriam belongs to the *centum* group. Some scholars have conjectured that Albanian was akin to the Thracio-Phrygian.

At present the Albanian language has been greatly influenced by Turkish, Greek and Slavonic languages, because of the successive dominations of these peoples.

The Albanian literature though fragmentary, started from the end of the 15th century A.D. As far as we know to-day

the oldest fragmentary documents of the Albanian language are found in the writings of the orthodox Bishop of Durrsës (1462 A.D.) and a translation of the Bible in 1555 and Meshari (official Manual) also in 1555. But its real literature dates from the 17th century A.D. The first printed book in the Albanian language was the *Dizionario Latino-Epirota* by Francesco Blanco (1635 A.D.).

Linguistically, "the Albanian distinguishes the IE palatals from the velars, though the labio-velars are distinguished from the velars, and like Slavic and Celtic, Albanian as a whole makes no difference between the IE voiced aspirates and voiced stops, though there is some evidence to suggest a distinction at least between initial IE*ǵ (= Alb. *dh*) and initial ǵh (= Alb *d*)¹."

VIII. ARMENIAN

The Armenian language also belongs to the *satəm* group as an independent member of the IE family of languages. It is spoken in Armenia (called by the Armenians as *Hayastan*, by the Turkish as *Ermanistan* and by the Georgians as *Somkhiti*), a mountaneous land-locked country of Transcaucasia which is surrounded by Georgia in the north, by Azerbaijan in the east, by Iran in the south, and by Turkey in the south-west and west. Linguistically, it is in the midway between Indo-Iranian and Greek, but it is distinct from both. Modern Armenian has been influenced by several neighbouring languages.

The earliest literature in the Armenian language as far as we know to-day, is the book of Agathanage who was the secretary of the king Tiridates. He wrote his book in Greek and translated into Armenian. He also wrote a biography of St. Gregory (239³—325 A.D.), the first patriarch of Armenia. Mesrob and Sahak (353—439 A.D.) also translated the Bible into Armenian. In fact the linguistic specimen of the Armenian literature is found in the early literature of the Armenian translation of the Bible and in the works of Bishop Eznik

¹ Language, 28, 1952, p. 31.

composed between the 4th and 5th centuries A.D. mostly by Christian Clergymen. With the invention of the Armenian alphabet of 36 letters by Mesrop Mastoty (=Mesrob Mashlotz), their literature was generally begun from about the 5th century, A.D. This alphabet is still in use for capitals. Our knowledge of the oldest Armenian is chiefly based on these works. Apart from this, there are some historical and theological writings from Greek or Syriac originals.

Among the IE family, Armenian is the most phonetically changed language. This change is due to the influence of Turkish, Hebrew, Arabic, and also of Iranian. In some respects, this language has a clear affinity with Hittite.

Armenia was under the Parthian autocracy between the 3rd century B.C. and 3rd cent. A.D. As a result lots of Parthian and Iranian words crept into the Armenian vocabulary. It is due to these Iranian-Parthian words, it was once regarded as a sub-division of the Iranian language. For a similar reason, when Armenia came under the Greek, it borrowed many Greek words into Armenian vocabulary. As the translation of the Bible is made into Armenian from using the Syriac and Greek sources, it has incorporated many Syrian words too. Although in Armenian, Iranian, Greek and Syrian words are profusely found, it has maintained its IE characteristics grammatically.

The place where this language was spoken seems to have been the southern Caucasus area. But the ancient historical findings of this country give us the idea that the original Armenian people migrated from the east of Caspian Sea to Tarawn on the shore of Lake Van in the Hittite empire, passing through the Black Sea in Asia Minor.

The influence of the languages mentioned above on Armenian cannot be denied and some of the peculiar changes can be ascribed to those foreign influences, but some of the basic characteristics of Armenian have some affinities with Hittite, and for which some of the modern linguists are inclined to consider Armenian not only an IE, but of Hittite as well. However, as a branch of IE language, it has

- (i) five vowels.

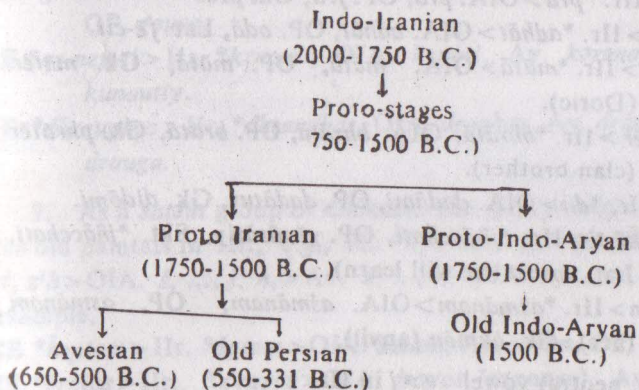
- (ii) complex consonantal clusters
- (iii) heavy stress-accent
- (iv) no grammatical gender
- (v) no perfect but retains the aorist
- (vi) Grimm's law is operative in Armenian. e.g. Lat. *decem* > Arm. *tasn*, (i.e. *d* > *t*).

IX. INDO-IRANIAN

The Indo-Iranian or the Aryan branch of the *satəm* group of the Indo-European family of languages comprises three groups of languages ; e.g.,

- (i) Iranian,
- (ii) Indo-Aryan, and
- (iii) Dardic.

The development of Indo-Iranian language is as follows :



It is assumed that some time between 2000-1750 B.C. the Iranian and the Indo-Aryan speaking people had a common speech, when they formed a single branch of the Indo-Iranian. It is also postulated that the common place of the Indo-Iranian was somewhere in Iran or south-eastern Mesopotamia, and the date of separation between the Iranian and the Indo-Aryan took place sometime between 1750-1500 B.C. So the Indo-Aryan speaking clans were originally immigrants in India. When the Indo-Iranian branched off from the IE as a separate group, it inherited some characteristics which

differentiated the Indo-Iranian from others as a separate branch. Some of the chief characteristics of the Indo-Iranian are noted below :

Phonology

1. The IE. short and long vowels \tilde{a} , \tilde{e} , \tilde{o} became short and long \tilde{a} in Indo-Iranian (= Ilr.) ; e.g.,

- IE **auges* > Ilr. **aujas*, Áv. *aojō*, OIA. *ojah*.
**esti* > **asti*, Av. *asti*, OIA. *asti*.
**ekʷos* > **aśvas*, Av. *aspō*, OIA. *aśvaḥ*.
**oma* > **ama*, Av. *ama*, OIA. *ama*.
**osth* > **asth-*, Av. *ast-*, OIA. *asth-i*.
**apo* > Ilr. **apa* > OIA. *apa*, OP. *apa*, Gk. *apo*, Lat. *ab*.
**ebherom* > Ilr. **abharam*, OIA. *abharan*, OP. *abaram*,
 Gk. *ēpheron*.
**pro* > Ilr. **pra* > OIA. *pra*, OP. *fra*, Gk. *pro*.
**edhēt* > Ilr. **adhāt* > OIA. *adhāt*, OP. *adā*, Lat. *fē-cit*.
**mātēr* > Ilr. **mātā* > OIA. *mātā*, OP. *mātā*, Gk. *mātēr*
 (Doric).
**bhrātēr* > Ilr. **bhrātā*, OIA. *bhrātā*, OP. *brātā*, Gk. *phrātēr*
 (clan brother).
**dō* > Ilr. **dū* > OIA. *dadāmi*, OP. *dadātuv*, Gk. *didōmi*.
**ǵnō-skē-ti* > Ilr. **jñācchati*, OP. *ḡšnāsātiy*, Skt. **jñācchati*,
 Lat. *noscet* (he will learn).
**ekmōn* > Ilr. **aśmānam* > OIA. *aśmānam*, OP. *asmānam*
 (acc), Gk. *ákmōn* (anvil).

2. IE. neutral vowel ə > i in Ilr.

- IE **greyəs* > Ilr. **kravis*, Av. *χravis*, OIA. *kraviḥ*.
**pətēr* > Ilr. **pitār*, Av. *pitā*, OIA. *pitā*.

3. The IE. sonant nasals m , n > $a(m/n)$ in Ilr.

- IE **k̑mtom* > Ilr. **satam*, Av. *satəm*, OIA. *sátam*.
**septn̥m* > Ilr. **sapta*, Av. *hapta*, OIA. *sapta*.

4. IE sonant liquids r and l became $ṛ$ in Ilr. which in Proto-Indo-Aryan became $ṛ$ ($ṛ$) and then $ṛ$ in OIA. ; e.g.

- IE **kṛ-neu-ti* > Ilr. **kṛnauti*, OIA. *kṛnoti*, OP. *kunautiy*, Av
kāṛənaoiti.

5. The IE short diphthongs **ai*, **ei* and **oi* became **ai* in IIr. and *e* in OIA, but *aē* or *ōi* in Avestan and *ai* in OP ; e.g.,

IE **bheretai* > IIr. **bharatai* > OIA. *bharate*, Gk. *pheretai*.

IE **eiti* > IIr. **aiti* > OIA. *eti*, OP. *aitiy*.

IE **neid* > IIr. **naid* > OIA. *ned*, Av. *nōit*, OP. *naiy*, Lat. *ne* in *nescio* (I don't know).

IE **oiyos* > IIr. **ai-vaš* > OIA. *e-ka*, Av. *aēvō*, OP. *aivam*, Gk. (Homeric) *oīos*.

6. The IE short diphthongs **au*, **eu* and **ou* became **au* in IIr. and *o* in OIA, but *au* in Old Persian, and *ao* or *ēu* in Avestan ; e.g.,

IE **maugha* > IIr. **maugha*, OIA. *mogha*, Av. *maoya*, OP. *mauga*.

IE **gheuso-* > IIr. **ghauša-*, OIA. *ghoša* (noise), Av. *gaoša-*, OP. *gausa*.

IE **qr-neu-ti* > IIr. **kṛnauti*, OIA. *kṛṇoti*, Av. *kəṛənoiti*, OP. *kunautiy*.

IE **dhrughos* > IIr. **dhraughas*, OIA. *droghas*, Av. *draogō*, OP. *drauga*.

7. As a *satəm* group of dialects, the IE palatals became the old palatals in IIr., e.g., IE **ċ*, **ċh*, **ġ*, **ġh* > IIr. *ś*, *śh*, *z'*, *z'h* > OIA. *ś*, ..., *j*, *h*, > Av. *s*, ..., *z*, *z*, OP. *s*, ..., *d*, *d*. For example,

IE **ċmtom* > IIr. **śatam* > OIA. *śatam*, Av. *satəm*, OP. *θataguš*.

IE **ġreiōs* > IIr. **z'rayas* > OIA. *jrayas* (expanse), Av. *zrayō*, OP. *draya* (sea).

IE **eġhom* > IIr. **az'ham* > OIA. *aham*, Av. *azəm*, OP. *adam*.

8. The IE velars and labio-velars when followed immediately by palatal vowels became the new palatals in IIr. by Aryan Law of Palatalization ; e.g.,

IE **leuges* > IIr. **raučas* > OIA. *rocas*, OP. *rauca*, Gk. *leukos*.

IE **auges* > IIr. **aujas* > OIA. *ojas*, Av. *aojas*, Lat. *augeō*, Goth. *aukan*.

IE **dhrughes* > IIr. **dhrughas* > OIA. *druhas*, Av. *druj*.

IE *que* > IIr. **ca* > OIA. *ca*, Av. *ca*, Gk. *te*.

IE **gʷem-ke-ti* > IIr. **jacchati* > OIA. *gacchati*, Av. *jasaiti*, of.
Gk. *baskō*.

IE **guhen* > IIr. **jhan-* > OIA. *hanti*, OP. *jantiy*.

IE **gʷiṇos* > IIr. **jīvas*, OIA. *jīvas*, OP. *jīva*.

9. The IIr. voiceless aspirates became spirant in PI, but this spirantization is lost in PIA. and became simple aspirate in OIA ; i.e.,

IE **kh* > IIr. **kh* > PI. **χ* > PIA. **kh* > OIA. *kh*

IE **th* > IIr. **th* > PI. **θ* > PIA. **th* > OIA. *th*

IE **ph* > IIr. **ph* > PI. **φ* > PIA. **ph* > OIA. *ph*

For example,

OIA. *mayūkha* : OP. *mayuxa* (door-knob)

OIA. *sakhā* : OP. *haxa* in *haxa-maniš*

OIA. *ratha* : Av. *raθa*, OP. *u-raθa*, Lat *rota*

OIA. *kapha* : Av. *kaofa*, OP. *kaufa* (mountain).

10. The IIr. voiced aspirates are retained in PIA., but deaspirated in PI. ; e.g.,

IE **eǵhom* > IIr. *ažham* > PIA. **azham* > OIA. *aham* PI. **azam*
> Av. *azəm*, OP. *adam*.

IE **dhāto* > IIr. **dhāta-* > PIA. **dhāta* > OIA. *dhāta*, PI. **dāta*.

IE **edhēt* > IIr. **adhāt* > OIA. *adhāt*, OP. *adā*.

IE **bheyeti* > IIr. **bhavati* > PIA. **bhavati* > OIA. *bhavati*, PI.
**bavati* > Av. *bavaiti*, OP. *bavaitiy*.

IE **ebherom* > IIr. **abharam* > OIA. *abharam*, OP. *abaram*.

11. The Grassmann's Law is operative in IIr. and in OIA as well, i.e., if in IE two aspirated consonants occur in contiguous syllables one of them (usually the first) is deaspirated in IIr. and Greek ; e.g.,

IE **bheudhiyeti* > IIr. **budhyati* > OIA. *budhyati*, Av. *buidyati*.

IE **dhuǵhētēr* > IIr. **dužhitār* > OIA. *duhitā*, Gk. *thugatēr*.

12. The Bartholomae's Law is operative in IIr. and in OIA as well ; e.g.,

IIr. **užhta* > PIA. **uždha* > OIA. *ūḍha*

IIr. **važhta* > PIA. **važdha* > OIA. *vāḍha*

Iir. **dughta* > PIA. **dugdha* > OIA. *dugdha*

Iir. **tṛnažhti* > PIA. **tṛnaždhi* > OIA. *tṛneđhi*.

13. Perhaps IE *r* and *l* became *r* in Iir. as the Avestan and Old Persian show, whereas both *r* and *l* are preserved in OIA, though in the oldest part of the R̥gveda *l* is less frequent than the *r*. For example,

IE **leuges* > Iir. **raučas* > OIA. *rócas*, OP. *rauca*, Gk. *leukós* (white).

IE **q^uel* > Iir. **car-* OIA. *car-ati*, OP. *car-* as in *abicariš* (pasture-land).

14. The development of IE **s* in Iir. is twofold. It developed into *š* in Iir. after *i*, *u*, *r*, *l*, and then this *š* is further changed into *ṣ* in OIA.; e.g.,

IE **sed-as* > Iir. **sadiš* > cf. OIA. *sadana*, OP. *hadiš* (seat), Gk. *hédos* (<IE **sedos*).

IE **ṛsti* > Iir. **ṛšti* > OIA. *ṛṣṭi-*, OP. *arštis*.

IE **tist(h)ēmi* > Iir. **tištāmi* > OIA. *tiṣṭhāmi*, Av. *hištaiti*, Gk. *histēmi*, Lat. *sisto*.

(a) The IE **s* became *s* in Iir. and in OIA, but *h* in OP.; e.g.,

IE **soluo-* > Iir. **sarva-* > OIA. *sarva-*, OP. *haruva*.

IE **snti_om* > Iir. **satyam* > OIA. *satyam*, OP. *hašiyam*.

15. The Indo-Iranian sibilants, voiceless or voiced, may be developed either from IE palatals (**ḱ*, **ḱh*, **ǵ*, **ǵh*) or from Indo-Iranian. The Iir. sibilants are described below:

Indo-Iranian	Voiceless		Voiced	
	unaspirate	aspirate	unaspirate	aspirate
Palatal	* <i>ṣ</i>	*(<i>ṣh</i>)	* <i>z</i>	* <i>z'h</i>
Cerebral	* <i>ṣ̌</i>	*(<i>ṣ̌h</i>)	* <i>ž</i>	* <i>žh</i>
Dental	* <i>s</i>	*(<i>sh</i>)	* <i>z</i>	* <i>zh</i>

Of these sibilants as developed from IE palatals, the Iir. voiceless aspirate sibilants (**ṣh*, **ṣ̌h*, **sh*) are lost in Iranian

and in OIA as well. Some try to connect OIA. *ch* with IIr. **śh*, but this is not proved conclusively.

The IIr. voiceless unaspirate sibilants (**ś*, **š*, **s*) are practically merged into *s* (or *ś* after *i* or *u*) in OP. In Avestan, however, there are three voiceless sibilants (*s*, *ś*, *š*). Somebody assumes a fourth one (*ś* < *rt*), a variety of *š* or *ś*. In general Avestan *s* corresponds to OIA. *ś*, and Avestan *ś* and *š* correspond to OIA. *ś*; e.g.,

G Av. *sāsti* (he teaches) : OIA. *śāsti*

Av. *sraēšta* : OIA. *śreṣṭha* (noblest).

16. Corresponding to voiceless sibilants, the IIr. also possessed the voiced sibilants, such as,

1. Palatal — **z'*, **z'h* > Ir. **z'* > Av. *z'*

2. Cerebral — **ž*, **žh* > Ir. **ž* > Av. ?

3. Dental — **z*, **zh* > Ir. **z* > Av. *z*

These IIr. voiced sibilants are lost in OIA. But in Iranian (Avestan and Old Persian), they are preserved with the loss of aspiration. The IIr. voiced aspirate sibilants occur after a voiced aspirate plosive. The treatment of IIr. voiced aspirate sibilants in OIA. is described below :

IIr. **z'*, **z'h*

17. The IIr. **z'*, **z'h* remained in PIA, but became *z'* or *z* in PI, and are lost in OIA ; e.g.,

IE **ēghom* > IIr. *az'hām* > OIA. *ahām*, PI. **az'am* > Av. *azəm*, OP. *adam*.

IIr. **ž*, **žh*

18. The IIr. voiced sibilants **ž*, **žh* did not survive in OIA. In certain positions *ž* became *r*, otherwise, it was entirely lost. But its loss was, however, compensated by the lengthening of a preceding short vowel, and sometimes followed by cerebralising the following dentals.

IIr. **ž* > OIA *r*

19. IIr. **ž* in final position became *r* in OIA only in Sandhi combination with a following word laying with a vowel or with a voiced consonant ; e.g.,

IE **potis dems* > IIr. **patišdams* > **patiždams* > OIA. *patirdan* (pl.).

IE **nis-eio-m* > IIr. **niš-āyam* > **nižāyam* > OIA. *nirāyam*, OP. *nijāyam*.

IE **dusmenos* > IIr. **dušmanas* > **dužmanas* > OIA. *durmanāh*.

IE **ghoris esti* > IIr. **žhariš asti* > **zhariž asti* > PIA. **zharir asti* > OIA. *harir asti*.

IE **medhus esti* > IIr. **madhuš asti* > **madhuž asti* > OIA. *madhur asti*.

When the following word begins with *r*, the first *r* disappears lengthening the preceding vowel ; e.g.,

IIr. **niš-raugas* > PIA, PI > **nir-rogaš* > OIA. *nīrogaḥ*.

IIr. **dušdabha* > PIA. *duždabha* > OIA. (vedic) *durdabha*.

20. The IIr. **ž* also cerebralises the following consonant in OIA. ; e.g.,

IE **nisdos* > IIr. **nišdas* > **niždas* > PIA. **nizda* > OIA. *nīḍa*, Pāli, Pkt. *neḍḍa* (< **niḍḍa*).

IE **pisdos* > IIr. **pišdas* > **piždas* > PIA. **pizdas* > OIA. *piḍaḥ*.

IE **seks-dekṃ* > IIr. *sašdaša* > **saždaša* > PIA. **saždaša* > OIA. *soḍaśa*.

IIr. **žh* > cerebralises the following dental

21. IIr. *žh* cerebralises the following dental ; e.g.,

IE **uegh-to-* > IIr. **vazhta* > PIA. **vazdha* > OIA. *ūdha*.

IE **ueghtum* > IIr. **vazhtum* > PIA. **vazdhum* > OIA. *voḍhum*.

IE **seghtum* > IIr. **šazhtum* > PIA. **sazdhum* > OIA. *soḍhum*.

IIr. **z*, **zh*

22. The IIr. **z*, **zh* are also lost in OIA. But in IIr. internal -*az* became *e* (and rarely *o*) in OIA. ; e.g.,

IE **esdhi* > IIr. **azdhi* > OIA. *edhi*, Av. *zdi*.

IE **sedjet* > IIr. **sazdyāt* > OIA. *sedyāt*, Av. *hazdyāt*.

IE **mṃsdhe* > IIr. **mazdhā* > PIA. **mazdhā* > OIA. *medhā*, Av. *mazdā*.

IE **deddhi* > IIr. **dadzdhī* > PIA. **dazdhī* > OIA. *dehi*.

IE **dhedhdhi* > IIr. **dhadhzdhī* > PIA. **dhazdhī* > OIA. *dhehi*.

IIr. -az>OIA. -o

23. The IIr. final -az became *o* in OIA. before a vowel or a voiced consonant ; e.g.,

IE *neros esti>IIr. *naraz asti>OIA(Vedic)naro asti>classical naro'sti.

IIr. -az>OIA. -e

24. In one instance the final -az became *e* as in eastern Prakrit (Māgadhi) ; e.g.,

IE *suolos dhuġhātēr>IIr. *sūraz duḡhitār>OIA. sūre duhitā (RV.).

IIr. āz>OIA. -ā

25. The IIr. final or medial -āz became -ā in OIA.

IE *kās̥dhi>IIr. śāzdhi>OIA. sādhi.

IIr. iz/iž>OIA. ī

26. In some cases the IIr. *iz* or *iž* became *ī* in OIA. with or without cerebralising the following dental ; e.g.,

IE *sed, *sisd-é-ti>IIr. *sīzdāti>OIA. sīdati, Av. hizdaiti.

IE *pisde->IIr. *pizda->OIA. pīḍa-.

IE *nisdos>IIr. *nizdas>OIA. nīḍa, Av. nizda.

IIr. *iz/iž>OIA. -ir (finally)

27. The IIr. *iz*/or *iž* finally became *ir* in OIA. before vowels and voiced consonants ; e.g.,

IE *nis-ēiōm>IIr. *niśāyam>*nirāyam>OIA. nirāyam.

28. It should be noted in this connection that PIA shows the retention of voiced sibilant which influenced the MIA in cerebralising the following dental ; e.g.,

IIr. *ut-st(h)āna>OIA. utthāna (regular OIA. form) but PIA. *uśthāna>MIA utthāna, Av. uštāna.

IIr. *ut-stiṣṭhati>OIA uttiṣṭhati (regular OIA form), but PIA. *uṣtiṣṭhati>MIA. utthiai.

IIr. *ut-stara>OIA. uttara, MIA uttara.

IE *mēns-dhe>IIr. *manzdhā>OIA. mandhā-tṛ (regular OIA form), but PIA. *mazdhā>OIA. medhā, Av. mazdā.

29. The elaborate declensional system of IE is generally preserved in IIr., but the dative is lost in Avestan and OP, and is expressed by the genitive (so also in Prakrit). The development of IIr. case-terminations is given below :

Singular

	IE	IIr	OIA	Av	OP
	<i>o-stem</i>	<i>a-stem</i>	<i>a-stem</i>	<i>a-stem</i>	<i>a-stem</i>
Nom.	-os	-aḥ	-aḥ	-ō	-a
Acc.	-om	-am	-am	-am	-am
Ins.	-ē, ō	-ā	-ā (vedic)	-ā (-a)	-ā
Dat.	ei, ai	ai	ay	lost	lost
Abl.	-ēd, -ōd	-ād	-ād (āt)	-āt	-ā
Gen.	osiō	-asya	-asya	-ahyā	ahyā
Loc.	-ei, -oi	-ai	-e	-ōi, -e	aiy
Voc.	-e	-a	-a	-a, (ā)	ā

Plural

	IE	IIr	OIA	Av	OP
	<i>o-stem</i>	<i>a-stem</i>	<i>a-stem</i>	<i>a-stem</i>	<i>a-stem</i>
Nom.	ōs	āḥ	āḥ	ā, a	
Acc.	ons	ān	ān	āṇhō	
Ins.	oibhis	aibhiṣ	āibhis	āibiṣ	aibiṣ
Dat.	oibhiōs	aibhyas	ebhyas	lost	lost
Abl.	oibhiōs	aibhyas	ebhyas	aēibyō	aibyo
Gen.	ōm	ānām	ānām	ānām	ānām
Loc.	oisu	aiśu	eśu	aēśu	aiśuvā
Voc.					

30. The IE conjugational system is also preserved in Indo-Iranian, though there are more innovations in the endings of tenses and moods, the most notable of which is the optional employment of the primary endings in the subjunctive mood. In various respects, the oldest Avestan is more archaic than the oldest Vedic.

In the oldest Gāthā dialect, the 1 sg thematic personal ending $-\bar{a}$ (<IE * \bar{o}) is retained, whereas in OIA. it is lost. In the earliest Vedic the athematic ending $-mi$ is generalised, as it is in later Avestan.

The aorist passive in $-i$ is common to both OIA and Avestan of which no parallel is found in IE languages ; e.g. OIA. *śrāvi* = Av. *srāvī* ; OIA. *avāci* = Av. *avāči*.

I. The Iranian

The Iranian sub-branches of the Indo-Iranian group comprise three regional groups—(i) North-East, (ii) South-West, and (iii) Eastern. The oldest documents of the Iranian branch are the Avestan and Old Persian. The Avestan is the language of East Iranian, and Old Persian is the language of West Iranian.

The Iranian languages are chronologically divided into three periods : old, middle and new. The approximate dates of the development of the Iranian languages are as follows :

7th cent. B.C.	—	300 B.C.	=	Avestan, Old Persian
		300 B.C.	—	900 A.D.
			=	Middle Persian (Pahlavi)
		900 A.D.	—	onward
			=	New Persian.

(i) Avestan

The origin and meaning of the word *Avesta* are obscure. The term *Avesta* (or in its older form *Avistāk*, modern Persian, *Āpastāk*) is a cognate with Skt. *as* with *abhi* (= *abhi* + *as*). But in meaning it is applied to a collection of writings which was popularly known as *Zend* or old *Bactrian*. The word was used for 'scriptures' in the Pahlavi version of the Sasanian time. Later on, the word came to signify 'wisdom', 'knowledge'

or 'the book of knowledge'. From the Pahlavi word *Avistāk vā zend*, the term Zend-Avesta was wrongly coined by Antequetil du Perron in 1771. Zend literally means 'explanation', and so Zend-Avesta would mean 'the scripture and the commentary.'

However, Avesta was the language of the court of *Vištāspa*, king of Bactria. It was before this king that the prophet Zarathustra preached his new religion. It is difficult to locate exactly the place of this language. As Zarathustra came from the north-west and preached his religion in the north-east (i.e. in Bactria), the whole northern range from west to east could be regarded as its location.

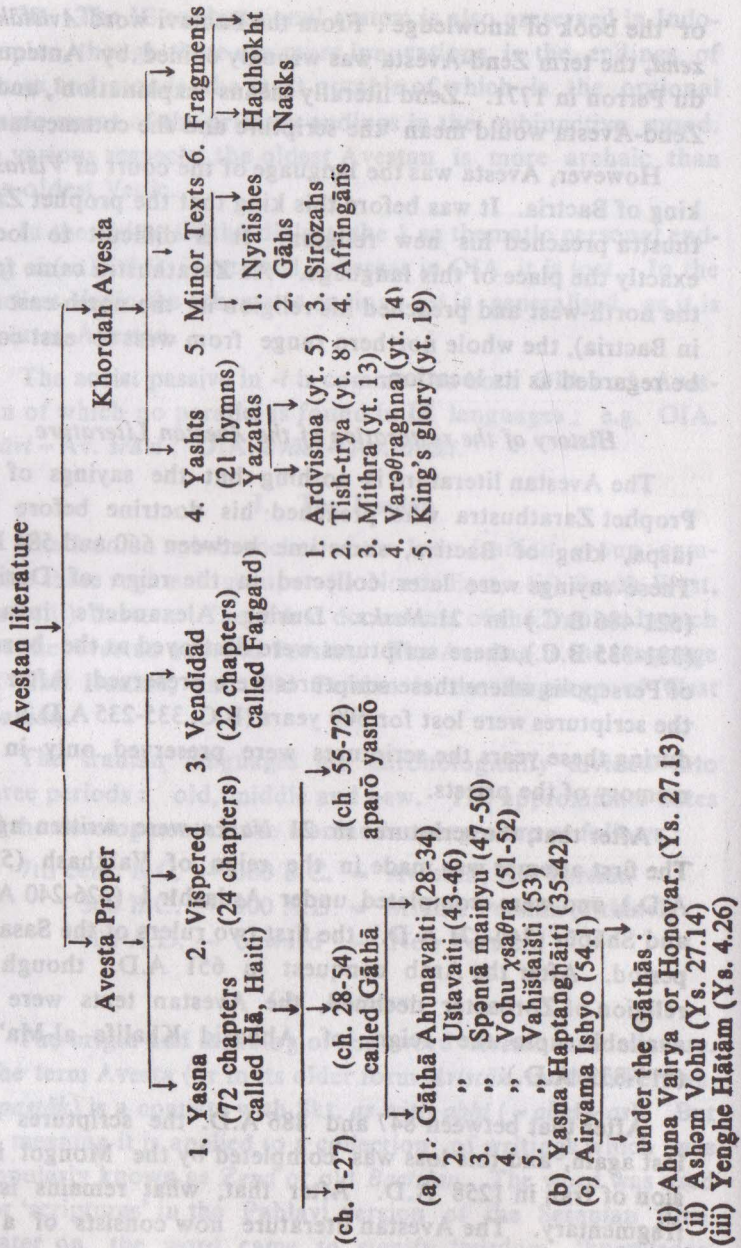
History of the restoration of the Avestan Literature

The Avestan literature is nothing but the sayings of the Prophet Zarathustra who preached his doctrine before *Vištāspa*, king of Bactria, sometime between 660 and 584 B.C. These sayings were later collected in the reign of Darius I (521-486 B.C.) in 21 *Nasks*. During Alexander's invasion (331-335 B.C.), these scriptures were destroyed at the burning of Persepolis where these scriptures were preserved. After that the scriptures were lost for 500 years (B.C. 335-235 A.D.). And during these years the scriptures were preserved only in the memory of the priests.

After that, the scriptures in 21 *Nasks* were written again. The first attempt was made in the reign of Valkhash (51-77 A.D.), and were completed under Ardashīr I (226-240 A.D.) and Shāpūr (240-271 A.D.) the first two rulers of the Sasanian period. After the Arab conquest in 651 A.D., though the religion of Zoroaster declined, the Avestan texts were still available upto the reign of Abbasid Khalifa al-Ma'mūn (813-833 A.D.).

After that between 847 and 886 A.D. the scriptures were lost again, and this loss was completed by the Mongol invasion of Iran in 1258 A.D. After that, what remains is but fragmentary. The Avestan literature now consists of a few fragments of the earlier compilation.

Avestan literature can be looked at a glance as follows ;



Avestan, however, is largely saturated with forms and idioms, belonging to the Eastern group as much as Zoroastrian had their strongest foot-holds in the Eastern region of Iran. The Avestan literature offers a parallel with Vedic literature and had been very rich once, but the invasion of Alexander made a great havoc with it, so that what has come down to us is only a fragment collected during the reign of the Sasanian dynasty (300-500 A.D.). The Avestan literature as available now presents two distinct linguistic strata. The oldest stratum comprises the five gāthās ascribed to Zoroaster himself (about 500 B.C.). The rest of the Avestan literature is known as younger Avestan and it often presents a mixture with middle Iranian. The Avestan literature reveals that before the advent of Zoroaster, the religion of Iranian people was very much similar, if not absolutely identical, with the religion of Vedic India. There are common gods—Mitra-Miθra; Vṛtraghna-Varəθragna; Agni-Ātār; Soma-Hoama. The term *asura* (Av. *ahura*) means the highest god as much in Avesta as in RV. At the same time there are some gods in Avesta, for example, *Indra*—*Indara*, *Nāsatiya*-*Nahaiθya*, which are very similar in nature with the R̥gveda.

With this we can compare the meaning of “*deva*”, Av. “*daeva*” which means demon just as in post Vedic literature “*asura*” means “a demon”. The Iranian possessed rituals like the Vedic people. The fire worship and the Soma worship were prevalent in ancient Iran. Hoama in the oldest Avestan literature shows a phraseology, alike with the R̥gveda, and the Avestan metres are identical with the Vedic metres. The following Avestan verse is composed in gāyatrī metre and its wordings are almost Vedic (quoted from Jackson).

Av. *təm amavantəm yazatəm*
sūrəm dāmōhu səvištəm
miθrəm yazāi zaθrābyō. (yt. 10.6)

Skt. *tam amavantam yajatām*
śūram dhāmasu śaviṣṭham
mitrām yajāi hōtrābhyah ||

Eng. 'Mitra that strong mighty angel, most beneficent to all creatures ; I will worship with libations.'

To understand the similarity between the two languages, an Avestan passage is quoted below together with its translation into Vedic :

*yō yaθā puθrām taurunām haomām vandaetā mašyō
frā ābyō tanubyo haomō vīsaitē baešazāi.* [Y. 10. 8]

In Vedic the passage will be

*yō yāthā putrām tārunām sōmam vandeta mārtyah
prā ābhyas tārūbhyah sōmo visate bhṛṣajāya ||*

The language of Avesta is very much similar to the Vedic Sanskrit. It is seen above that an Avestan passage can easily be turned into a Vedic passage by applying phonetic rules. The Avestan language possesses more linguistic features of IE than Old Persian.

In Avestan literature two types of language are noticed : Gathic Avestan and younger Avestan. The Gāthā language has more archaic forms than the younger Avesta. Below is given a general survey of Avestan language together with Sanskrit.

The Avestan language has the following sound system.

I. Vowels :

	Simple							Diphthongs					
Short	a	i	u	ə	e	o	ərə						
Long	ā	ī	ū	ē	ē	ō	ā̇	āi	au	aē	ōi	ā̇ (-ao)	ēu

II. Consonants :

	Voiceless		Voiced		
	unaspi- rated	aspirated spirant	unaspi- rated	aspirated spirant	nasals
Gutturals	<i>k</i>	<i>x</i>	<i>g</i>	<i>γ</i>	<i>ŋ</i>
Palatal	<i>c</i>	—	<i>j</i>	—	<i>ñ</i>
Dental	<i>t</i> (<i>ṭ</i>)	<i>θ</i>	<i>d</i>	<i>ð</i>	<i>n</i> (<i>ṇ</i>)
Labial	<i>p</i>	<i>f</i>	<i>b</i>	<i>w</i>	<i>m</i>
Semi-vowels		<i>y r</i>		<i>v</i>	
Sibilants	<i>š š s</i>		<i>ž z</i>		
Aspiration	<i>h</i>		<i>h</i>	<i>(x xʰ)</i>	
Ligature	<i>hv</i>				

Avestan vs Old Indo-Aryan

1. The Avestan vowels *a, ā, i, ī, u, ū* agree in general with Old Indo-Aryan ; e.g.,

OIA. *a* = Av. *a* : OIA. *aśnoti* = Av. *asnoiti*
 OIA. *asti* = Av. *asti*
 OIA. *sacā* = Av. *hacā*
 OIA. *agnih* = Av. *atrəm* (though altogether a different word)
 OIA. *dama* (house) = Av. *dam*, Gk. *domos*,
 Lat. *domus*

OIA. *ā* = Av. *ā* : OIA. *mātaras* = Av. *mātārō*
 OIA. *vātāis* = Av. *vātāiš*
 OIA. *gātum* = Av. *gātuš*, OP. *gāθu*.

OIA. *i* = Av. *i* : OIA. *it* = Av. *it*
 OIA. *citra* = Av. *ciθra*

OIA. *i* = Av. *i* : OIA. *dhi* (wisdom) = Av. *dī*, *δī*
 OIA. *jīvyam* = Av. *jīvyām* (acc. sg. fem.).

OIA. *u* = Av. *u* : OIA. *subhadra* = Av. *hubadra*

o/A. *ū* = Av. *ū* : OIA. *sūkta* = Av. *hūṣta*
 OIA. *sūnuḥ* = Av. *hūnuš*
 OIA. *bhūmim* = Av. *būmim*

2. OIA. *r* becomes *ərə* in Avestan, and rarely as *are*, and very rarely as *ra* ; e.g.,

OIA. *kṛnoti* = Av. *kərənoiti*

OIA. *sakṛt* = Av. *hakərat*

OIA. *mṛtyuḥ* = Av. *marəthyuš*

OIA. *mṛga* = Av. *mərəya*, Mod. P. *mury* (bird)

but OIA. *ṛtuḥ* = Av. *ratus* (< **ərətuš*), Gk. *artus*, Lat. *artus*.

(a). In a very rare instance OIA. *r* is equated with Av. *a* : e.g.,

OIA. *ṛta* = Av. *aša*.

3. The Avestan language is characterised by two sounds represented by *ə* and *ē* which are not found in Old Persian and in Old Indo-Aryan. The *ə* sound in Avestan is a sort of neutral vowel which corresponds roughly in most cases to OIA *a*, and the long *ē*, which is confined to Gāthās only, also tallies with OIA *a* ; e.g.,

OIA. *dhātām* = Av. *dātaməm*

OIA. *santi* = Av. *hənti*, OP. *hantiy*

OIA. *avindan* = Av. *vindəm* (they found)

OIA. *santam* = Av. *həntəm* (being)

OIA. *upām* = Av. *upəməm* (beside *upaməm*)

OIA. *namah* = Av. *nəmə*, Mod. P. *namāz*.

But OIA. *a* is represented by *ē* in Gāthās ; e.g.,

OIA. *aham* = YAv. *azəm*, GAv. *azēm*

OIA. *yam* = YAv. *yim*, GAv. *yēm*

OIA. *sam* = YAv. *həm*, GAv. *hēm*,

4. OIA. *e* is represented by *aē*, *ōi* and *ē* in Avestan. In general, OIA. *e* agrees with Av. *aē*, but finally with *ē*; e.g.,

OIA. *veda* = Av. *vaēda*

OIA. *senā* = Av. *haēnā*

OIA. *śreṣṭha* = Av. *sraēšta*

OIA. (Vedic) *devām* = Av. *daēvām*, Lat. *deum*

but finally—

OIA. *yajate* = Av. *yazaitē*

(a) In Gathic Avesta OIA. *e* is represented by *ōi*; e.g.,

OIA. *vettha* = G.Av. *vōistā*

OIA. *gave* = G.Av. *gavōi*

OIA. *ye* = G.Av. *yōi*

OIA. *ke* = G.Av. *kōi*.

5. OIA. *o* is generally represented *ao* in Avestan, but rarely by *ōu*, and finally by *o*; e.g.,

OIA. *ojas* = Av. *aojō*

OIA. *proktas* = Av. *fraoxtō*

OIA. *rohanti* = Av. *raodānti*

OIA. *hotā* = Av. *zaotā*

but rarely by *ōu*—

OIA. *kratoḥ* = Av. *xratōuš*

OIA. *manyoh* = Av. *mainyōuš*

OIA. *ghoṣāiḥ* = G. Av. *gēušāiš*

6. OIA *āi* and *āu* are represented by *āi* and *āu* in Avestan; e.g.,

OIA. *vātāis* = Av. *vātāiš*

OIA. *mantrāis* = Av. *manθrāiš*

OIA. *gāus* = Av. *gāuš*

7. The Avestan diphthong *ā* (*-āo*) tallies with OIA *ās*, and rarely with *ānt*; e.g.,

OIA. *devāsaḥ* = Av. *daēvānghō*

OIA. *mahāntam* = Av. *mazāntam*

8. Avestan consonants agree in general with OIA consonants. But of the OIA palatals, Avestan has only *c* and *j*,

and the whole series of cerebrals are not found in Avestan. OIA velars, dentals and labials agree with Avestan. There are five nasals in Avestan as in OIA., but only *ñ*, *n* and *m* correspond to Avestan nasals.

9. But OIA voiced aspirates are lost in Avestan, so also the voiceless aspirates are unknown in Avestan as in Greek. But there developed voiceless spirants or affricates (*χ*, *θ* *f*) in Avestan, and sometimes we get voiced spirants or affricates (*γ*, *δ*, *ω*) in Avestan in place of OIA voiceless and voiced aspirates. For example,

OIA. <i>kratus</i>	= Av. <i>χratuš</i>
OIA. <i>sakhā</i>	= Av. <i>haχā</i>
OIA. <i>satya</i>	= Av. <i>haθyō</i>
OIA. <i>gāthā</i>	= Av. <i>gāθā</i>
OIA. <i>svapnam</i>	= <i>χ^hafnəm</i>
OIA. <i>kapham</i>	= <i>kafəm</i>
OIA. <i>jaṅghā</i>	= <i>zangā</i>
OIA. <i>dhārayat</i>	= Av. <i>dārayat</i>
OIA. <i>bhūmi</i>	= Av. <i>būmi</i>
OIA. <i>bharantaḥ</i>	= Av. <i>barantō</i> , Gk. <i>pherontes</i>
OIA. <i>dirghaḥ</i>	= Av. <i>darəyō</i>
OIA. <i>adhvānam</i>	= Av. <i>aḍwanəm</i>
OIA. <i>abhram</i>	= Av. <i>awrəm</i>

10. In Avestan as also in OP *l* is entirely absent as in the case of the earlier Veda. But in Old Persian *l* occurs in three or four borrowed words only, such as *Dubāla*-, a district in Babylonia, *Haldita*-, an Armenian, *Izalā*-, a district in Assyria, *Labanāna*-, Mt. Labanon; otherwise in general an original *l* became *r* in OP even in borrowed words, e.g., *Babiru*- = Akkadian *bab-ilu* < Hebrew verb *bālal* meaning 'confuse' = Babylon; *Tigra* = Akk. *di-iq-lat*.

11. Initially OIA *s* becomes *h* in Avestan e.g.;

OIA. <i>sakṛt</i>	= Av. <i>hakərət</i>
OIA. <i>somaḥ</i>	= Av. <i>haomo</i>
OIA. <i>sindhuh</i>	= Av. <i>hindu</i>
OIA. <i>asu</i>	= Av. <i>ahu</i> , <i>aṇhu</i>

- OIA. *sapta* = Av. *hapta*
 OIA. *satya* = Av. *heiθya*, OP. *hašiya*
 OIA. *sacā* = Av. *hacā*, OP. *hacā*
 OIA. *sacate* = Av. *hacaitē*, Gk. *hepetai*, Lat. *sequitur*
 OIA. *sacasva* = Av. *hacañuha*, Gk. *speio*, Lat. *sequere*

12. Final *as* and *ās* (i.e. OIA. *aḥ* and *āḥ*) become *ō* and *ā* (= *āo*) respectively in Avestan ; e.g.,

- OIA. *yajñah* = Av. *yasnō*, Gk. *hagnós*
 OIA. *gāthāḥ* = Av. *gāθā*

13. OIA. *h* is represented by Avestan voiced sibilants *z* and *ž* which are special development in Iranian. Its corresponding old Persian development is *d* ; e.g.,

- OIA. *aham* = Av. *azəm*, OP. *adam*
 OIA. *hastah* = Av. *zastō*, OP. *dasta*
 OIA. *ahih* = Av. *ažiš*
 OIA. *dahati* = Av. *dažaiti*

14. Avestan language is replete with Epenthetic and Prothetic vowels whereas OIA. does not have them ; e.g.,

- A. Epenthetic : OIA. *bharati* = Av. *baraiti*
 OIA. *pāti* = Av. *pāiti*
 OIA. *yajate* = Av. *yazaitē*. Gk. *hazomaī* (< *hagiomai)

- B. Prothetic : OIA. *riṇakti* = Av. *irinaxti*

15. The Avestan texts are not marked by accent, and so it is difficult to guess the position of accent in Avestan. But from the lengthening and dropping of vowels, it appears that there was, at least, *stress* accent in Avestan apart from pitch which is found in Vedic.

16. In general the Avestan declensional pattern agrees with the OIA (= Sanskrit). Like Sanskrit, it has eight cases (nominative, accusative, instrumental, dative, ablative, genitive, locative and vocative), three numbers (singular, dual and plural), and three genders (masculine, feminine and neuter). The uses of the cases agree in general with the Sanskrit. The dual number is extremely rare in Avestan as in OIA. Like

Sanskrit, the Avestan declension is divided into two classes : vowels and consonants. In many respects Avestan preserves more original archaic forms than OIA. Below is given a paradigm of Av. *yasna-* and Skt. *yajña-* to understand the declensional pattern of Avestan and Sanskrit.

Sanskrit *yajña-* = Av. *yasna-*, 'sacrifice'.

	Singular		Dual		Plural	
	Sanskrit	Avestan	Sanskrit	Avestan	Sanskrit	Avestan
Nom.	<i>yajñā-s</i>	<i>yasn-ō</i>	<i>yajñ-ā</i> (vedic)	* <i>yasn-ā</i>	<i>yajñ-ās</i> <i>yajñ-āsas</i> (vedic)	<i>yasnā</i> <i>yasnān</i>
Acc.	<i>yajñ-am</i>	<i>yasn-əm</i>	„	„	<i>yajñ-ān</i>	<i>yasn-ā</i>
Ins.	<i>yajñ-ā</i> (vedic)	<i>yasn-a</i>	<i>yajñ-ābhyām</i>	<i>yasn-aēibya</i>	<i>yajñ-āis</i>	<i>yasn-aīs</i>
Dat.	<i>yajñ-āya</i>	<i>yasn-āi</i>	„	„	<i>yajñ-ebhyas</i>	<i>yasn-aēibya</i>
Abl.	<i>yajñ-āt</i>	<i>yasn-āt</i>	„	„	„	„
Gen.	<i>yajñ-asyo</i>	<i>yasn-ahe</i>	<i>yajñ-ayos</i>	<i>yasn-ayāng</i>	<i>yajñ-ānān</i>	<i>yasn-anā</i>
Loc.	<i>yajñ-e</i>	<i>yasn-e</i>	„	„	<i>yajñ-eṣu</i>	<i>yasn-aē</i>
Voc.	<i>yajñ-a</i>	<i>yasn-a</i>	<i>yajñ-ā</i>	* <i>yasnā</i>	<i>yajñās</i>	

17. Avestan and Sanskrit also agree in forming the comparative and superlative degrees of adjectives. In Avestan they are formed in two ways : (i) *-tara* and *təma*, and (ii) *-yah* and *išta* corresponding to Sanskrit *tara* and *tama*, and *īyas* and *iṣṭha*. A few examples are given below :

Positive	Comparative	Superlative
	(i) <i>tara</i>	<i>təma</i>
<i>baēšazya</i> 'healing',	<i>baēšazyōtara</i> ,	<i>baēšazyōtəma</i>
<i>ašaojah</i> 'very strong',	<i>ašaojastara</i> ,	<i>ašaojastəma</i>
<i>yāskərət</i> 'energetic',	<i>yāskərəstara</i> ,	<i>yāskərəstəma</i>
<i>aməvant</i> 'strong',	<i>aməvastara</i> ,	<i>aməvastəma</i>

(ii) -yah ista

maz 'great',	mazyah,	mazišta
vahu 'good',	vaṇhah,	vahišta
āsu 'swift',	āsyah,	āšišta

18. Avestan numerals also correspond to OIA. They are declined from one to four, and from eleven to nineteen, they are formed like Sanskrit. The ordinals are also declined like Sanskrit. Some examples are given below :

Sanskrit	Avestan	Sanskrit	Avestan
1. e-ka	: aēva	20. viṃśati	: vīśaitī
2. dvā/dva	: dva	30. triṃśat	: θrisat-
3. tri	: θri	40. catvāriṃśat	: caθwarəsat-
4. catvāra	: caθwara	50. pañcāśat	: pañcāsāt-
5. pañca	: pañca	60. ṣaṣṭi	: hvṣvaṣti
6. ṣaṣ	: hvṣas	70. sapṭati	: haptaiti
7. sapṭa	: haptā	80. aṣṭi	: aṣṭaiti
8. aṣṭa	: aṣṭa	90. navati	: navaiti
9. nava	: nava	100. śatam	: satəm
10. daśa	: dasa	1000. sahaśra	: hazayra
12. dvādaśa	: dvadaśa		
15. pañcadaśa	: pañcadaśa		

19. In its main outlines the Avestan pronominal declension agrees with Sanskrit. In both cases, they are generally made up with many peculiarities and by a number of different stems. Like Sanskrit, as in other cases, the personal pronouns are not distinguished by gender, whereas, in demonstrative, relative and interrogative, they are distinguished by gender. For understanding a close similarity, a comparative table of the first and second personal pronouns are given below :

First person Av. *azəm* = OIA. *aham*

	Singular		Plural	
	Sanskrit	Avestan	Sanskrit	Avestan
Nom	<i>aham</i>	<i>azəm</i>	<i>vayam</i>	<i>vaēm</i> (<i>vayəm</i>)
Acc	<i>mām, mā</i>	<i>ma₁m, mā</i>	<i>asmān, nas</i>	<i>ahma, nō</i>
Ins	...	...	...	...
Dat	<i>mahyam, me</i>	<i>māvōya, mē</i>	<i>asmabhyam, nas</i>	<i>ahmaibya, no</i>
Abl	<i>mat</i>	<i>mat</i>	<i>asmat</i>	<i>ahmat</i>
Gen	<i>mama, me</i>	<i>mana, me</i>	<i>asmākam nas</i>	<i>ahmākəm, nō</i>
Loc	...	...	...	...

Second person Av. *tum* = OIA. *tvam*

	Singular		Plural	
	Sanskrit	Avestan	Sanskrit	Avestan
Nom	<i>tvam</i>	<i>rūm</i> (<i>tvəm</i>), <i>tū</i>	<i>yūyam</i>	<i>yūzəm</i>
Acc	<i>tvām, tvā</i>	<i>θwam, θwā</i>	<i>vas</i>	<i>vō</i>
Ins	<i>tvā</i> (Vedic)	<i>θwā</i>	...	...
Dat	<i>tubhyam, te</i>	<i>taibya, tē</i>	<i>yušmabhyam, vas</i>	<i>yušmaoyō, vō</i> <i>hvšmāvōya</i>
Dlb	<i>tvat</i>	<i>θwat</i>	<i>yušmat</i>	<i>yūšmat</i>
Gen	<i>tava, te</i>	<i>tava, te</i>	<i>yušmā kam, vas</i>	<i>yūšmākəm, vō</i>
Loc	...	...	...	...

20. In form, character, and even in usage, the Avestan verbal system corresponds closely to the Sanskrit. Like Sanskrit, the Avestan verbal system is characterised by root, person, number, voice, mood, tense, augment (very rare in Av.) reduplication, aspect (*vikaraṇas*, ten *gaṇas*), stem-system, personal terminations and conjugation. It has infinitive, participle and gerund. Like Sanskrit, it has also secondary conjugation—passive, causative, denominative, desiderative and intensive. The conjugation pattern agrees with the Sanskrit. For example, take the Skt. verb *bhar* (< *bhr̥*) and Avestan verb *bar*, 'to bear' :

Present

	Third		Second		First	
	Skt.	Av.	Skt.	Av.	Skt.	Av.
Sg.	<i>bharati</i> : <i>baraiti</i>		<i>bharasi</i> : <i>bārahi</i>		<i>bharāmi</i> : <i>barāmi</i>	
Du.	<i>bharatas</i> : <i>haratō</i>		<i>bharathas</i> : ...		<i>bharāvas</i> : ...	
Pl.	<i>bharanti</i> : <i>barənti</i>		<i>bharatha</i> : <i>baraθa</i>		<i>bharāmasi</i> : <i>barā mahi</i> (vedic)	

Imperfect

	Third		Second		First	
	Skt.	Av.	Skt.	Av.	Skt.	Av.
Sg.	<i>abharat</i> : <i>barat</i>		<i>abharas</i> : <i>barō</i>		<i>abharam</i> : <i>barəm</i>	
Du.	<i>abhara-</i> : <i>baratəm</i> <i>tām</i>		<i>abharatam</i> : ...		<i>abharāva</i> : <i>barāva</i>	
Pl.	<i>abharan</i> : <i>barən</i>		<i>abharata</i> : <i>barata</i>		<i>abharāma</i> : <i>barāma</i>	

21. The Avestan future is formed with *-hy-* (or *šy-*) as in OIA. *sy-* (= *šy-*) added to the root ; e.g., OIA. *vak-šy-ā-mi* = Av. *vahv-šy-ā*.

22. The Avestan aorist system exactly agrees with OIA in form and usage. Aorist in general, describes a simple past action both in Vedic and Avestan. Like Sanskrit, the aorists are thematic (or non-sigmatic) and athematic (sigmatic)

comprising seven sub-varieties altogether. In the Avestan augment in aorist is not generally used as is very often found in Vedic literature. For example, Av. *dā*, give = Skt. *dā*.

	Third		Second		First	
	Skt.	Av.	Skt.	Av.	Skt.	Av.
Sing.	<i>adāt</i> : <i>dāt</i>		<i>adāḥ</i> : <i>dāṅ</i>		<i>adām</i> : —	
Pl.	<i>aduḥ</i> : <i>darə</i>		<i>adāta</i> : <i>dātā</i>		<i>adāma</i> : <i>dāmā</i>	

23. The perfect in Avestan also corresponds to Sanskrit in form and usage. Like Sanskrit, the perfect is reduplicated and the endings also differ from the present. The vowel in the reduplicated syllable is *a* as in Sanskrit ; eg.,

Sanskrit	:	Avestan
<i>dadarṣa</i>	:	<i>dādarəsa</i>
<i>dadhātha</i>	:	<i>dādāθa</i>
<i>cakruḥ</i>	:	<i>caḥrarə</i>
<i>tataḥṣa</i>	:	<i>tataša</i>
<i>tūtāva</i>	:	<i>tūtāva</i>

24. In general the pluperfect forms are almost lost in both Vedic and Avestan. Only a few (doubtful) forms are recognised for pluperfect both in Vedic and Avestan, but they could be equally treated as reduplicated aorist forms. Avestan *āvaocat* (= Skt. *avocat*) is both pluperfect and reduplicated aorist. Similarly Vedic examples are—*acacakṣam* (< *cakṣ*), *acucyavīt* (< *cyu*), *ajagrabhīt* (< *grabh*) etc.

25. In Avestan, OIA periphrastic forms are entirely lost, only three or four forms are found sporadically in younger Avestan ; e.g., *biwivāṇha* (> *bī* + *aṇha*) 'he had frightened'.

26. Some Vedic infinitives are preserved in Avestan ; e.g.,

(i) OIA. *-dhyāi* = Av. *-dyāi* (a dative infinitive)

Av. *dərə-dyāi* (G Av.), 'for holding'. Av. *vazai-dyāt* (YAv.) 'for driving.'

- (ii) OIA. *-taye* = Av. *tāe* (a dative infinitive)
 Av. *anu-matāe* = OIA. *anumataye* ; Av. *kəratāe* = OIA. *kṛtaye*.
- (iii) OIA. *āi* = Av. *āi* (a dative infinitive)
 Av. *jayāi* (to win), *fradaθāi* (to promote).
- (iv) OIA. *-ase* = Av. *aṇhe*. (chiefly found in Gathic Avestan)
 Av. *avaṇhe* (to aid), *vaocaṇhē* (to speak), *srāvayerṇhē* (to repeat).

27. As in Sanskrit, Avestan participles are also formed with *-ant/-at* (<*nt) in the active and *mna/āna* (<māna) in the middle ; e.g., *bārant* (<bar), *barəmnā* (<bar) = OIA. *bharant* and *bharamāna* respectively.

28. Like Sanskrit, Avestan gerund is formed with *tva* and *θwa* (= OIA. *tvā*), and with *ya* (OIA. *ya*) ; e.g.,

- √jan—Av. *jaiθwa* = *hantvā*, having killed,
 √varz—Av. *varštva* 'having done',
 √var—Av. *vairya* = OIA. *varya*, having chosen.

29. The Avestan secondary conjugations and their formations also agree with Sanskrit.

30. After having compared the Avestan language with Sanskrit, an Avestan hymn is quoted below with their rendering in Sanskrit to show how they resemble each other in poetical composition and metre.

Yasna IX. 5.

Sanskrit rendering

<i>Yimahe xšaθre aurvahe</i>	<i>yamasya kṣatre *urviyasya</i>
<i>nōit aotəm aṇha nōit garəməm</i>	<i>net *odam āsa net gharmanam</i>
<i>nōit zaurva aṇha, nōit mərəθyuš</i>	<i>net jarā āsa net mṛtyuḥ</i>
<i>nōit araskō daēvo- dātō :</i>	<i>net reṣako deva-dhātah</i>
<i>pañcadasa fracarōiθe</i>	<i>pañcadaśā pracarete</i>
<i>pitā-puθras-ca raodaēšva</i>	<i>pitā putraśca *roheṣu ā</i>
<i>(katarascit)</i>	<i>(katarascit)</i>
<i>yavata xšayōit hwa θwō</i>	<i>yāvat (a) kṣayet suvanta</i>
<i>yimō vivaṇuhatō puθrō.</i>	<i>yamo vivasvataḥ putrah.</i>

Eng. Tr.—“During the rule of the illustrious Yima there was neither (excessive) cold nor (excessive) heat, neither was (there) old age nor death, nor (was there) envy created of the Daēva. Father and son moved about, each (seeming) only fifteen (years) in appearance as long as Yima the magnificent, the son of vivaṇhvāt, reigned”. [Taraporewala].

(ii) *Old Persian*

Old Persian is known from the Inscriptions of the Achaemenian Dynasty (521-338 B.C), written in cuneiform alphabet of 36 signs deciphered by Sir Henry Rawlinson (1810-1895). The Old Persian inscriptions are also translated into Elamite and Accadian.

In ancient Iran, it was the language of south-western Persia. The boundary of OP territory was the Persian Gulf on the south, Mesopotamia, Armenia and the Caucasus Mountains on the west, the Caspian sea on the east and Afghanistan, Pamir plateau of Turkestan and the Indus River, to the Gulf of Oman on the north. Today this is almost the same area of the modern Persian language.

Old Persian is represented mainly by the inscriptions of Darius the Great (521-486 B.C) and Xerxes (486-65 B.C) and down to Artaxerxes III (359-338 B.C). These inscriptions are found in Persia, at Persepolis, in Elam and at Susa, in Media, at Hamadan, in Armenia and along the line of Suez Canal.

The other less known languages of ancient Iran are the Median, Carduchi, Parthian, Sogdian and Scythian. These languages are known from glosses, place and personal names and from the development in Middle Persian.

The Middle Iranian (300 B.C.-900 A.D) is represented by Pahlavi which can be compared with the Prakrit in India. Pahlavi is a general name given to the Middle Iranian. It has many varieties or dialects. These are—Arsacid Pahlavi, Sassanian Pahlvi, Book Pahlavi and Pahlavi found in the Turfan manuscripts.

The new or modern Persian (900 A.D onwards) is developed from the middle Persian, i.e., Pahlvi. It has several dialects, of which Persian (*Fārsī* or *Irānī*) is the national language of Persia today. In this language the *Shāh Nāmāh* or 'Book of Kings' composed by Firdausi sometime in the 10th-11th centuries A.D. is the national Epic of Persia.

Old Persian vs Old Indo-Aryan

The language of Old Persian is very similar to classical Sanskrit as Avestan has close affinity with the Vedic. These

two languages are complementary and supplementary to Old Indo-Aryan and the contribution of Avestan and Old Persian to the development of OIA is immense. Old Persian also shows greater affinity with the Middle Indo-Aryan (MIA). This affinity is greatly seen in morphology and not in phonology.

The Old Persian sound system as derived from IE is as follows :

- I. Vowels : *a, ā, i, ī, u, ū, ra* (<*r), *ai, āi, au, āu*
- II. Consonants : *k, x, g ; c(č), j(j̥) ; t, θ, d, n ; p, f, b, m ; y, r, v ; š, ṣ, s, z, h*. [*l* occurs only in foreign names].

1. The OP vowels and consonants generally agree with the Sanskrit. But OIA *r* became *r* (or *ra*) in OP and the short diphthongs *ai* and *au* remained so in OP whereas they became *e* and *o* in classical Sanskrit. In Vedic, however, *e* is often diphthongised ; e.g., *śreṣṭha* > Vedic *śraiṣṭha*.

2. In consonants, there are no voiced aspirates, but voiceless aspirates became voiceless spirants. The OIA. *tr* developed as *θr* = *ṣ*. Voiced sibilant also occurs in OP as in Avestan.

3. In OP the final consonant is generally lost, except *-m*, *-r*, and *-š*, as also in MIA where only *m* can be used finally, e.g., OP. *akunava* (they did) < **akunavant*, *aḵa* (he killed) < **aḵant*, *martiya* (man) < **martiyus*. The weakening of final consonant as we find it in MIA has actually started from the OP stage. This is also reflected in Vedic, e.g., *paścāt* > *paścā* (AV. IV. 10.3).

4. In case-endings, OP has preserved some primitive forms. The instrumental plural ending is *-biš* (Skt. *-bhis*) which becomes *-hi* or *hiṃ* (< *bhim*) in MIA. The *-āis* form is never used in OP.

5. The genitive singular ending in OP is *āha* (< **āsa*) ; e.g. *mazdāha*. This *-āha* ending is found in Magadhī ; e.g., *pulīśāha* < *puruṣasya*.

6. Like Sanskrit and Avestan, the comparative and superlative degrees of adjective are formed with (i) *tara* and *tama*

and (ii) *iya* (< IE *ies/ios) and *ista* (< IE *isto). For example, (i) Comp. OP. *fratara*, Sup. *fratama*, (ii) Comp. OP. *tauviyā*, 'stronger' (< *tauv-*) Sup. *maṭiṣṭa* 'greatest' (cf. Av. *masista-*, Doric. *mākistos*).

7. The OP numerals are not generally represented by words, but by numerical signs. Hence the words for numerals are scanty. Only a few in cuneiform characters are written; e.g., *aivam* (one), *ha-karam* (once), cf. Skt. *sa-kṛt* (once), *duvitiyam* (twice) cf. Skt. *dvitiya*, *ṣitīyam* (thrice), cf. Skt. *trītiya*, *navama* (ninth), *ṭata-guṣ* (hundred villages).

8. The OP pronouns also correspond to Sanskrit. The first and second personal pronouns are only given for illustration.

	First person		Second person	
	Singular	Plural	Singular	Plural
Nom	<i>adam</i>	<i>vayam</i>	<i>tuvam, tuva</i>	
Acc	<i>mām, mā</i>		<i>ṭuvām</i>	
Abl	<i>ma</i>			
Gen	<i>manā, maiy</i>	<i>a(h)māxam</i>	<i>taiy</i>	

9. The ten *gaṇas* of Sanskrit are also found in OP.

10. Like classical Sanskrit, the augment is used in the imperfect and aorist in OP; e.g., *āham* (I was), *abaram* (I brought), *akuma* (we made). In one or two aorist forms which are found in OP, the augment is retained; e.g., *niyapaiṣan* (= *ni + a + paiṣan* of the root *paiṣ*, 'I wrote'), *adrṣiy* (I seized), cf. Gk. *ēdeiksa*.

11. The imperfect and aorist are merged together. But aorist optative *bīyā* (Skt. *bhūyāt*) is found. In fact aorist is lost, except one or two forms, such as, *akunauṣ(t)*, *niyapaiṣam* (I wrote), are found. But a few old aorist forms in *-iy* are preserved; e.g., *akariy* (it has been done), *aṭahiy* (it has been said).

12. In OP there is no future tense, and the idea of futurity is expressed by the subjunctive which is lost both in classical Sanskrit and MIA.

13. The perfect tense disappears in OP as in MIA. But only one form of perfect optative (*čaxriyā*) is found in OP. And in this respect, it follows the model form of Sanskrit.

14. Like MIA, the OP is replete with the past passive participle (= Skt. *ta*) for the past tense.

15. The infinitive is formed with *-tanaiy* which has come from dative sg. ; e.g., *čartanaiy*, 'to make', 'to do', *θastanaiy* 'to say'. The participles and gerunds are almost lost in OP.

16. The Sanskrit root *kar* (<*kr*) becomes *kur* in classical Sanskrit and *ku* in OP and also *ku* (*kuṇai*) in Prakrit.

17. In OP the dual number is rarely used. It is practically lost as in MIA. The duality is expressed by the word *ubā* 'both', as in MIA where *do*, *duve*, *duvi*, 'two' and *ubho* are used. The only verbal form *ajīvatam* ('the two lived') is used. in OP. But no dual forms are available in OP as in MIA.

18. In OP no dative form is used ; it is replaced by the genitive, so also in MIA where dative is lost, except some older archaic forms, and is replaced by genitive.

In order to show the extreme closeness between OP and Sanskrit, an OP passage is given below translating it word for word into Sanskrit :

adam Dārayavauš xšāyaθiya vazraka xšāyaθiya xšāyaθiyānām xšāyaθiya Pārsaiy xšāyaθiya dahyūnām vištaspahyā puṣṣa Aršāmahyā napā Haṣāmanišiya θātiy Dārayavauš xšāyaθiya manā pitā vištāspa.

Sanskrit rendering :

*aham Dhārayadvasuḥ kṣatriyaḥ (<*kṣāyatriya) vajraka (mod. Per. buzurg = Skt. *bujurgah) kṣatriyaḥ kṣatriyānām kṣatriyaḥ Pārse kṣatriyaḥ dasyūnām vištāśvasya putraḥ *ṛṣāmasya napāt sakhāmaniṣya śamsati Dhārayadvasuḥ kṣatriyaḥ mama pitā vištāśvaḥ.*

Eng. Tr. "I am Darius the Great king, king of kings, king in Persia, king of countries, son of Hystaspes, grandson

of Arsames, an Achaemenian, said Darius the king. My father was Hystaspes."

II. Dardic

The next to Iranian is the Dārdic language, once known in Dardistān, a place between the north-west of the Panjab and the Pamirs. It seems that the Dardic languages were split off after the Indo-Aryan had separated from the Iranian during the Proto-Iranian period. In the Epics and in the Puraṇas, particularly in the *Bhaviṣyat Purāṇa*, a detailed description of the Dards (Skt. *Dārada* or *Darada*) is given. They are also known as *Piśāca* tribe, and hence their language is known as *Paiśāci*. There is a great affinity with the Indo-Aryan, and the influence of Dardic may be traced in Lahndā, Sindhi, Panjabi, Nepāli and even in Kōṅkaṇī. The modern Dardic languages are Kāshmiri (which has a literature), Shinā (of Gilgit Valley), Kohistani and the Kafir languages.

III. The Indo-Aryan

The history of Indo-Aryan language, in its old, middle and new forms, is the history of 3500 years of literary activities of the Aryan people in India. These years are divided, for our convenience, into three distinct periods—old, middle and new—in accordance with the development of the Indo-Aryan language. The old stage of the Indo-Aryan as represented by the Vedic and Classical Sanskrit, known as Old Indo-Aryan (= OIA), extends from B.C. 1500 to B.C. 500 covering a period of one thousand years, after which the historical period of the middle stage, known as Middle Indo-Aryan (= MIA), began to appear on the horizon. The approximate date for the MIA is 1500 years beginning from the 6th or 5th century B.C., i.e., from the time of Mahāvīra (599-527 B.C.) and Buddha (566-486 B.C.) down to the 1000 A.D.—a time which is regarded as a landmark for the beginning of the New Indo-Aryan (= NIA). This NIA period covers only one thousand years. So the history of the Indo-Aryan language is the history of these three periods—OIA, MIA and NIA.

The Indo-Aryan is a primarily inflexional and synthetic type of language, where verbal and nominal inflexions, suffixes, prefixes and infixes play a very prominent part, without which its very existence is not quite imaginable. Being an inflexional language, the word-order in a sentence is not strictly followed. This inflexional type of Indo-Aryan is basically found in the old stage and partly in the middle stage, while its new Indo-Aryan forms are analytic, i.e., they have modified in the direction of simplification. They have mostly lost their inflexional endings and the use of word-order has also been changed, in some cases their suffixes and prefixes have also been simplified to a moderate stage.

The Old Indo-Aryan is strictly represented by the Vedic literature in general, and the classical Sanskrit, which is in a sense more or less artificial, is added owing to its continuation as an offshoot of the Vedic language. This classical Sanskrit has been in use for about 2500 years when Indo-Aryan has passed from the old stage to the middle and from the middle to the new. Besides, classical Sanskrit includes a number of forms which are definitely of late origin and a number of words which has been taken from MIA. The MIA forms indicate the influence of Prakrit on Sanskrit, which is known as Prakritism in Sanskrit, e.g., OIA *indra* > *indira*. The MIA stage did not arrive all of a sudden. The forces that brought about the change from the old stage to the middle, has been operating from a very long period. The tendency of Prakritism is seen even in the R̥gveda which shows the influence of Prakrit in a few words, such as, *vikṛta* > *vikata*, *śithira* > *śithila*, etc. In spite of the Prakritism and the innovations, the Sanskrit grammar has largely retained the frame of Vedic grammar. It also possesses words and forms which are old but do not occur in the RV. For these reasons, Sanskrit is also included in Old Indo-Aryan.

The MIA stage is represented by (i) the Aśokan and other inscriptions, (ii) by Pāli canonical literature, (iii) by different Prakrits appearing in Sanskrit dramas, (iv) by the Śvetāmbara and Digāmbara canonical literatures, (v) by several books,

such as *Paūmacarīam*, *Gāthāsaptasatī*, *Setubanda*, *Gauḍavaha* etc., (vi) by Apabhraṃśa as found in the fourth act of Kālidāśa's *Vikramorvaśīyam*, and by the works of Svayambhū's (7th or 8th cent. A.D) *Paūmacariu*, Puṣpadānta's (10th cent A.D) *Tisatṭhi-mahāpurisa-guṇālankāra*, *Jasaharacariu*, *Nāya-kumāra-cariu*, Dhanapāla's (10 cent. A.D) *Bhavissayattakahā*, Hemacandra's (1088-1172 A.D) Apabhraṃśa verses in his Prakrit grammar and by many others.

From Apabhraṃśa, as developed in different regions of India, the New Indo-Aryan languages have come into existence. Apabhraṃśa is further broken into Avahaṭṭha stage which is mainly represented by the *Kīrtilatā* of Vidyāpati Ṭhākura (15th cent. A.D.) and according to some, by *Prākṛta-Piṅgala* (14th cent. A.D.), though some want to include the *Caryāgīti* and the *Ḍākārṇava-tantra* as well which are also regarded as specimens of old Bengali. For the older stage of the New Indo-Aryan languages some works are noteworthy. The *Ukti-vyakti-prakarṇa* of Dāmodara (12th cent. A.D) is a work in old Kośalī which was spoken round about Awadhī (= modern Audh). Jñānadeva's (13th cent. A.D.) *Jñāneśvarī* is a commentary on the *Bhagavad-gīta*, known as *Bhāvārthadīpikā* in the *Oṽī* metre in old Mārāṭhī. It was completed in 1290 A.D. In a similar way, the works of Kabir and Sūrdās for Brajbhāṣā, works of Guru Nānaka (*Ādigrantha*) for Panjabī, the works of Malik Muhammad Jaīsī (1540 A.D.) and Tulasidāsa (1575 A.D.) for Awadhī, *Ḍholāmāru rā Ḍohā*, *Vēli Kṛṣṇa Rukminī Rī* and Mirā Bhāī's devotional songs for Mārwarī are to be studied.

It is a fact worth noting that for the NIA languages, Apabhraṃśa has played a prominent part. That is why the *Caryāgīti* is claimed by all as the oldest specimens of their respective languages. It can be said that before the finalisation of the New Indo-Aryan languages, there was a "common" Northern Indo-Aryan (or Proto-New Indo-Aryan) stage which developed through Apabhraṃśa and Avahaṭṭha, and whose characteristic features can be reconstructed on the

basis of the oldest texts of old Bengali, old Kōśali, old Mārāṭhi, Brajbhāṣā, old Panjabī and old Mārwarī.

IV. History of Old Indo-Aryan (Sanskrit)

Origin and development of Old Indo-Aryan

The origin of the Old Indo-Aryan, which stands for both Vedic and classical Sanskrit, can be traced primarily from the Indo-Iranian (2000-1500 B.C.), a subbranch of the Indo-European (2500-2000 B.C.) family of languages. It is, therefore, closely connected with the Indo-Iranian on the one hand, and remotely with the Indo-European on the other. The Indo-Iranian again passes through some proto stages—Proto-Iranian (2000-1750 B.C.) and Proto-Indo-Aryan (1750-1500 B.C.) before the dissemination of Iranian and Indo-Aryan languages into two distinct groups. The discovery of Hittite though has further pushed back the date of Indo-European with a new ramification of Indo-Hittite (3000-2500 B.C.) starting roughly from 3000 B.C., has not basically disturbed the origin of Old Indo-Aryan from Indo-Iranian and Indo-European as well.

The development of Old Indo-Aryan language is not static. It changes from time to time. From the Vedic till the time of Pāṇini (1500-400 B.C.) OIA had passed through several stages before it took a final form; and even after Pāṇini certain changes were also noticed, though not in a great number of them. These changes are recorded in the literatures of OIA developed at different places and times. These changes in grammatical forms can be accounted for "dialectal variations" influenced by the then "spoken speech" of different provincial countries. However, for our convenience the stages of Old Indo-Aryan can be enumerated below :

<i>Approximate Dates</i>	<i>Formative periods</i>	<i>Documents</i>
B.C. 1500-1250	Early Vedic Stage Saṃhitā Period [Formation of Old Indo-Aryan (Sanskrit)]	Oldest portions of the Rgveda (II-VII maṇḍalas).

1250-1000	<i>Middle Vedic Stage</i> [Post Ṛgvedic Period]	Younger Ṛgveda (I, VIII-X), Sāma, Yajur and Atharva Vedas
1000-800	<i>Late Vedic Stage</i>	Brāhmaṇas
800-700	<i>Pre-Classical Stage</i> [Beginning of Sanskrit]	Āraṇyakas
700-600	<i>Early Classical Stage</i>	Upaniṣads, Sūtras.
600-500	Formation of Classical Stage	Yāska, Prātiśakhyas, Pre-Pāṇinian Grammarians.
500-400	Epic Periods	Rāmāyaṇa (400 B.C.—200 A.D.) Mahābhārata (400 B.C.—400 A.D.)
400-200	I. Classical Period	Pāṇini (400 B.C.) Kātyāyana (250 B.C.)
200 B.C.— 200 A.D.	II. Classical Stage Buddhist Sanskrit	Bṛhaddevatā, Ṛgvidhāna. Purāṇas, Patañjali (150 B.C.)
A.D.		
200-600	III. Classical Stage	Sanskrit Court Epics and Dramas.
600-800	IV. Classical Stage	Bhāravi, Bhaṭṭi,
800-1000	V. Classical Stage Jaina Sanskrit	Kumārādāsa, Māgha
1000-1500	Post Classical Stage	Śriharṣa etc.
1500-1800	Neo Sanskrit Stage	Sanskrit literature influenced by vernaculars of modern Indian languages, e.g., Sekaśubhodayā.
1800— onwards :	Modern Sanskrit Stage :	In this stage the Sanskrit language is greatly influenced by regional languages of modern India mainly in their vocabulary and syntax.
1800-1900	(a) Early Modern Sanskrit	
1900—onwards	(b) Modern Sanskrit	

Besides IE and IIr, several other factors are also responsible for the formation of the old Indo-Aryan. Before the formation of the language, OIA has passed through Pro-Indo-Aryan stage to Vedic through an intermediate Spoken Sanskrit—a language whose existence can only be hypothetically reconstructed on the basis of Proto-Indo-Aryan and Prakrit. Several OIA forms can only be justified, if the influence of Spoken Sanskrit or Prakrit is acknowledged. The Prakrit language was a spoken language. Many of the features of Prakrit have a parallel in Vedic language, and many of the classical forms can only be properly understood, if the influence of Prakrit is recognised in them. Besides these Aryan languages, OIA is also influenced by some non-Aryan languages, such as, Dravidian, Austric, Tibeto-Burman etc.. What is today's Sanskrit is a conglomeration of all these factors. So for the origin of OIA, the different stages are IE → IIr → Pro-Indo-Aryan → Spoken Sanskrit (including Sanskrit dialects) → Vedic → Classical → modern Sanskrit. A detailed and comprehensive study of OIA will reveal the fact that OIA was never orthodox and constant throughout the ages of its development.

It is to be remembered at the same time that though there are variations in forms, the linguistic physiognomy of Sanskrit provides us with some criteria which enable us to decide that it is written in Sanskrit, and not in any other languages. This is what we call the Sanskritness of Sanskrit,* which is found in phonology and morphology, and even in syntax and semantics, and in other aspects of the language.

For the development of Sanskrit, several stages can be conceived. There is no reason to believe that Sanskrit has been or is a homogeneous language throughout its history and in a similar way, there is no reason to believe that it has always been the same in all parts of India. There are ample indirect evidences, though not always very clear and forceful, to prove from literatures and records that at different places in India, there were varieties of Sanskrit, and sometimes these varieties are preserved in literature without realising that they are varieties of Sanskrit dialectal forms. There is also no

reason to believe that all the literatures were written down in a particular area for all times to come. Different types of literature were grown at different places and at different times. And it can be inferred that those literatures must have recorded some features which were not current in other places at the same time. We could have proved this fact with certainty, if we had known that such and such literatures were composed at such and such geographical area. We are not very definite about their places of composition of the earliest literature, except in a very few cases, where we could guess the locality of some Sanskrit texts merely based on tradition or on some results of modern research.

The variety of Sanskrit forms, as preserved in different branches of Sanskrit literature beginning from Vedic down to the time of Kālidāsa, or even later than that, shows that those forms are not merely the alternative forms of the same expressions, but as dialectal variations of the same form. To be more precise, a large mass of Vedic variants in different Vedic texts, such as, Saṃhitās, Brāhmaṇas, Āraṇyakas, Upaniṣads, and later ancillary Vedic texts, does not necessarily mean simply variants, but may be cases of dialectal differences. We may consider them as possible dialectal influence from 'popular speech' by their resemblance to the phonetics of the later Middle Indic dialects. It is a fact worth noting here that there is no point in assuming that these Vedic texts were all composed in one particular geographical area, nor were they all composed at a particular time. So difference in time and place makes the difference in reading from one to another. For example, the reading *etagvā* in *citrā etagvā anumādyāsaḥ* (RV. I. 115.3), also found in the Maitrāyaṇī Saṃhitā (IV. 10.2), has a variant *edagvā* in the Taittirīya Brāhmaṇa (II. 8.7.1) where also the same verse occurs. So also *māṭṛka* for *māḍṛka* in the TĀ (I.5.1). This difference in reading between the RV and the other texts may be regarded as a case of pure Prakritism, but this Prakritism is through the "popular speech" where there is a variation between a voiceless and a voiced consonant.

Sometimes these forms are preserved through Sanskritization of Prakrit forms. The large mass of variants of this kind, clearly points to the extensive influence of Middle Indo-Aryan phonetics in the earliest period of the language and this seems to us as dialectal variations of the Sanskrit language represented through Middle Indo-Aryan. How the colloquial language, say Prakrit, has influenced the Vedic language is evidenced from the forms like *vikaṭa* and *vikṛta*, *śithira* and *śithila* from *śrath*.

Though there are several stages of the old Indo-Aryan from the Saṃhitā period down to modern time, the basic division is the two : Vedic including post-Vedic (1500-400 B.C) and Classical including post-Classical, (400 B.C onwards), and each division is greatly influenced by Prakrit. By Vedic we generally mean the four Saṃhitās, Brāhmanas, Āraṇyakas, Upaniṣads, Sūtras, and some ancillary Vedic texts, such as, Bṛhaddevatā, R̥gvidhāna, etc. Even in the Vedic period there are several stages, and in each stage there are some linguistic peculiarities. From the early to late Vedic stages, the general trend of the language is still in a sense the remnants of the early and middle stages, but the language of the Upaniṣads belongs to the last phase of the Vedic and pre-classical stage. Some of the Vedic usages are still then available. In the sūtra literature, the language is very near to the grammar of Pāṇini, hence, the appellation 'pre-classical period'. The style of sūtra literature is very terse and almost devoid of relative and conditional clauses. As the nature of sūtra literature is to make the sentences short, the long compounds and gerunds are exceptionally rare. Even then, some of the Vedic features are still available. There are enough evidences of Prakritism and solecism in the language of the sūtras.

By classical we mean Sanskrit whose language can go on a par with the grammar of Pāṇini. The two epics—the Rāmāyaṇa and the Mahābhārata—are also included, because the language is very similar with the norms of Pāṇini. Even though Sanskrit is stereotyped after Kalidāsa, the variations in forms cannot be ignored, and for these variations the

then local language, Prakrit, seems to be immensely responsible.

It is to be noted here that the only difference of the influence of Prakrit between the Vedic and classical Sanskrit lies in the fact that in the Vedic literature their influence is inexplicable, spontaneous unless we assume that they have crept into the Vedic from an old Prakrit current at that time, and which was the basis of the Middle Indo-Aryan, and the influence of Prakrit to Sanskrit is from the Middle Indo-Aryan directly.

When the Buddhists, well-versed in Pāli, started writing Buddhist scriptures in Sanskrit, there arose a type of literature which was known in course of time as Buddhist (Hybrid or Mixed) Sanskrit. This type of literature was grown out of 'Popular Sanskrit' which was greatly influenced by Middle Indo-Aryan, particularly by Pāli. In the uses like *bhikṣu-sya*, *agni-sya* in place of *bhikṣoh*, *agneḥ* on the analogy of *a*-stem *narasya*, *janasya*, there was a tendency of levelling out the declensional pattern. This is also reflected in Sanskrit sentences like—*udadhisyottare kūle mṛtaḥ kim anuśocyate*, *atijarasasya bhikṣusya kanthā varṣaśataṃ gatā*, as cited by Śaraṇadeva in his *Durghaṭavṛtti*. All these uses are not without any reason, nor are they grown out of ignorance. A large mass of Buddhist Sanskrit literature is grown out of this popular Sanskrit. These are *Mahāvastu*, *Saddharmapuṇḍarika*, *Lalita-vistara*, *Avadāna-śataka*, *Jātaka-mālā*, *Suvarṇabhāṣottama-sūtra*. All these texts are very rich in MIA construction, though written in Sanskrit.

In a similar way when the Jains well-versed in Prakrit and Ardha-māgadhi, preached their doctrines to the public in Sanskrit, there infiltrated the influence of Prakrit and Ardha-māgadhi in this Sanskrit literature. The texts which abound in this type of Sanskrit language are—*Upamitibhava-prapañca-kathā* of Siddharṣi, *Śāntinātha-mahākāvya*, *Pārśvanātha-carita*, *Pañca-tantra* of Puṇyabhadra, *Varāṅgacarita*, *Bṛhatkathā-koṣa* of Hariṣeṇa, *Parīṣiṣṭaparyan* of Hemacandra, *Citrasena-padmāvatī-carita*, *Samarāditya-saṃkṣepa* of

Pradyumnasūri, *Bhagavati-Ārādhana*, *Ādipurāṇa* of Jinasena, *Dharmaparīkṣā* of Amitagati and so on.

The main feature of modern Sanskrit is the vernacularism which started roughly from the sixteenth century A.D. in the *Sekasubhodayā*. The vocabulary and syntax are greatly influenced by modern regional languages. For example, *svadeśaṃ vihāya anyadeśaṃ jagāma*, here *anyadeśaṃ* (influence of Bengali) may be replaced by *deśāntaram* in classical Sanskrit. So also the example, *mama haste ekavāraṃ miṣṭānnaṃ avaśyaṃ bhoktavyam* seems to be a translation from a Bengali line *āmār hāte ek-bār miṣṭānna avaśya khāibe*. Examples need not be multiplied.

From the above, it appears that though the formation of old Indo-Aryan is heterorganic, the basic division is the two : Vedic and classical, as also recorded by Pāṇini. And this difference of the two is vivid not only in form, subject-matter or spirit, in metres, pada-text or saṃhitā-text, but also in phonology, morphology, syntax and vocabulary including semantics.

Vocabulary : It is generally seen that the early Vedic vocabulary is very much archaic and is largely peculiar to Vedic usage. But the treatment of the early Vedic words in subsequent stages is varied. In the second stage, though it is still a Vedic period, most of the early Vedic archaic words started going to be out of use, and gradually became obsolete. In the classical stage, though vocabulary is tremendously enriched, the use of almost fifty percent early Vedic words is completely lost. Words like *mṛlika*, *gr̥ṇāna*, *doṣāvasta*, *sumna*, *sunītha*, *meni* (RV. X.27.11) 'anger', (cf. Gk. *mēnis*, wrath) and many others are not in use in classical Sanskrit.

Some of the Vedic words are used in a different sense in classical Sanskrit. For example, *arka* means *udaka* (water) in *ya ugrā arkam ānṛcuḥ* (RV. I. 19.4) where Sāyaṇa, quoting from ŚB *āpo vā arkah* (X. 6.5.2), supports his statement. In classical Sanskrit this meaning is rare and is used in the sense of *sūrya* (Sun) which has come down upto Bengali. The Vedic words like *krandasi*, *rodasi* in the sense of "heaven and earth" have become obsolete in classical literature, though Kālidāsa has used

rodasī in the *Vikramorvaṣīya* as—*vedānteṣu yam āhuḥ puruṣaṃ vyāpya sthitaṃ rodasī* (I. 1) in that sense. But Tagore uses the word *krandasi* in *Urvaśī* (*Citrā*) in the sense of 'a girl in tears'.

The word *geha*, 'house' seems to be a Prakrit word from Skt. *gṛha* (*r* > *e*). The word first occurs in VS (30.9) : *sandhāye jārāṃ gehāyopapatimārtiyai*. The word was current till the time of Pāṇini *gehe kaḥ* (III. 1.144) which means the root *gṛha* will take the suffix *ka* in the sense of *geha*. Bhaṭṭoji Dīkṣita has used the word in his *Siddhānta-kaumudī* (*gehe praviṣati*).

The three words *dabhra*, *dahra* and *dahara* meaning 'small' are in use in the early and late vedic texts. *dabhra* first occurs in the RV (I. 113.5), and the other two words derived from *dabhra* are found in the Upaniṣads. *dahara* occurs in the Chā. Up. : *asmin brahmapure daharaṃ puṇḍarikam veśma daharo' smin nantarākāsāḥ* (VIII. 1.1).

The word *mā* in the sense of 'goddess of fortune' is a Prakrit word from *mātā* > *māā* > *mā*, being goaded with the idea that Lakṣmī 'nourishes the people like a mother' (hence called *loka-mātā*).

Classical Sanskrit has incorporated many words in its vocabulary from various sources, even from Prakrit. For example, we have *khura* < Skt. *kṣura* in Kālidāsa's *rajaḥkaṇaiḥ khuroddhūtaiḥ* (*Raghu*. I. 85) 'with particles of dust raised up by (her) hoofs'. Kālidāsa has also used the word *piyāla* < Skt. *piyāla*, in the sense of a particular kind of tree in *mṛgāḥ piyāla-druma-mañjarīṇām* (*Ku*. 3.31). The same word is also found in the *Bhāgavata* (VIII. 2.11).

Bhavabhūti has also used a Prakrit word *galla* (Bengali *gāl*) in his *Mālatīmādhava* : *pātāla-pratimalla-galla-vivara-prakṣipta-saptārṇavam* (V. 22) in the sense of 'the cheek'.

The word *hāla* 'a kind of wine' is a Prakrit word as mentioned by Dhanapāla (9th cent. A.D) in his *Pāṇialacchīṇā-mamālā* and it occurs also in Somaprabhācārya's (12th cent. A.D) *Kumārāpālāpratibodha*. It has been Sanskritised, and used by Kālidāsa in his *Meghadūta* (I. 52) *hīrvā hālāḥ abhimata-rasām* 'leaving off wine off agreeable flavour'.

Balarāma is so fond of wine that *Halin* came to be as one of his synonyms. Māgha also has used the word in his *Śiśupāla-vadha* (X. 21). Vāmana in his *Kāvya-lāṅkāra-sūtra* (V. 1.13) considers this word as a *deśī* word though used in Sanskrit.

Some scholars opine that in the Vedic vocabulary some non-Aryan words are also found. Max Müller has seen a Babylonian influence on the Vedic word *manā* in the following hymn :

ā no bhara vyañjanam
gām aśvam abhyañjanam /
sacā manā hiraṇyayā // [RV. VIII. 78. 2.]

—‘O India, bring to us a brilliant jewel, a cow, a horse, an ornament, together with a golden *manā*’.

Metres : Vedic language also differs from classical with regard to the use of metres. There are seven principal metres of the Vedas, and these are—*gāyatrī*, *uṣṇik*, *anuṣṭubh*, *bṛhatī*, *pañkti*, *triṣṭubh*, and *jagatī*, but classical Sanskrit presents a limitless variety of metres, but not the Vedic. The metrical lengthening is a peculiar feature in Vedic, while it is not found in classical Sanskrit.

Pada texts : The Vedic *pada-pāṭha*, the oldest and the most authoritative commentary on the RV, as well as the first systematic work on grammar, occupies a unique place. It analyses the stanzas of the RV into their constituent padas, and throws a flood of light on many difficult and disputed points of exegesis. This *padapāṭha* is entirely lost in subsequent Vedic literature including classical Sanskrit.

Accent : The Vedic language is characterised by accent. The four Vedas and the *Aitareya* and *Śatapatha* Brāhmaṇas are marked with accents which are *udātta* (acute), *anudātta* (grave) and *svarita* (circumflex). Accent often determines the meaning of a word, e.g., the word *indraśatruḥ* when accented on the first syllable means “he whose killer is Indra”, but when accented on the final syllable means “the killer of Indra”. In a similar way, *āpas* (work) : *apās* (active) , *té* (they) : *te* (your), *bhūman*

(earth) : *bhūmān* (abundance). Accent does not play any part in subsequent Vedic literature as well as in classical Sanskrit. But from the treatment of accent in Middle Indo-Aryan, it appears that a sort of stress accent was developed in the classical period.

Phonology : Both in Vedic and classical Sanskrit, all the sounds are the same, except cerebral *ḷ* and *ḷh* which are also preserved in Pāli. In the Vedic non-initial (i.e. intervocal) *ḍ* and *ḍh* become cerebral *ḷ* and *ḷh* respectively. This fact is recorded by Śaṅguruśiṣya in his commentary on Kātyāyana's *Sarvānukramaṇī* (under RV.I.28) thus :

aj-madhyastha-ḍakārasya ḷ-kāraṇ Bahvr̥cā jaguḥ |
aj-madhyastha-ḍhakārasya ḷh-kāraṇ vai yathākramam ||

e.g., *īḷe*, *mṛḷe*, *puroḷāśam*, *dṛḷhā*, *sāl̥hā*. *ṣaḷarvī*, *jihīḷa eṣā*.

These two sounds *ḷ* and *ḷh* came down to *Ā* stage, though the frequency is less than the RV. In later Vedic and classical Sanskrit, they are completely lost. But in JaiGS (I.14) *ḷ* is used for *ḍ*, e.g., *kāraḷi*.

It is owing to the influence of Prakrit sometimes *r* becomes *a*, *u* or *e* in Vedic, but not in classical ; e.g., *vikṛta* > *vikṛta* (Vedic), *vṛnda* > *bunda* (RV. VIII 77.11), *gr̥ha* > *geha*. This tendency is noticed till the time of Sūtra literature, e.g., *r* > *a* as in *aṇika* < *r̥nika* (ApDhS, I.6.19.1)

The sounds *e* and *o* are generally diphthongs in Vedic, but they are monophthongs in classical Sanskrit ; e.g., *śreṣṭha* > *śraiṣṭha* (vedic), Av. *sraēsta*, *jyeṣṭha* > *jyaiṣṭha*, *tredhā* > *traidhā* (RV. I. 154.1). In the *Prātiśākhya*s *e* and *o* are called *sandhyakṣara*, i.e., to be pronounced as *ai* and *au*. But monophthongization of *e* and *o* started from the middle vedic stage, in classical they became monophthongs.

Like Prakrit, sometimes vowels are lengthened after the loss of a sound, as *durdabha* > *dūḷabha* (RV. IV. 9.8).

Sometimes vowels are elided in vedic ; e.g., *niviviṣire* > *niviviṣre* (RV. VIII. 101.14). But this is absolutely rare in classical.

We know that Prakrit does not allow any final consonant,

as *tavat* > *tāva*, *yāvat* > *jāva*, *karman* > *kamma*. In Vedic also we find that sometimes a final consonant is elided, as *devakarmebhiḥ* (RV. X. 130.1) from *devakarma*.

In Prakrit sometimes *h* becomes *dh*, as Skt. *iha* > *idha* in Śaurasenī, so also in Vedic *śrudhi*, *saha* : *sadha* (RV. I. 121.15). These interchanges are also noticed between *h* and *gh*, e.g., *meha* > *megha* (Nir. II. 1.2), *āhr̥ṇi* > *āghr̥ṇi* (RV. VI. 55.1)

Owing to the influence of palatal sounds the dentals are changed into palatals in Prakrit. This is also noticed in Vedic ; e.g., *avadyotayati* > *avajyotayati* (ŚB. I. 2.3.16) ; *dyuti* > *jyuti* > *jyoti* (light).

In the early Vedic stage the cerebralization is regular, e.g., *viṣṭara*, *suṣṭhu* etc., whereas in the middle stage cerebralization is not very frequent ; e.g., *vistara* and *sustha* as opposed to the earlier ones. In the sūtra lit. it is seen that the dental *n* becomes *ṇ* as in Prakrit e.g., *ṇāma* (ĀpŚS, X. 14.1), *eṇam* (ĀpŚS, XIV. 27.7), *anulepaṇa* (ĀpDhS I.3.11.13).

In a similar way there is an interchange of *ś* and *s* ; e.g., *vaṣṭiyān* for *vasiṣṭyān* (KauS. IV.15), *pāṃṣu* for *pāṃsu* (KauS. 27.18 ; 29.21)

Occasionally *y* is written for *j* as in Māgadhi ; e.g., *yunaymi* (KauS. 3.1)

In the later Vedic, *ts* > *cch*, e.g., *avatsādyā* > *avacchādyā* (KauS. 24.10).

In general though hiatus is not possible in OIA as in MIA, a few examples of internal hiatus are available in the early Vedic ; e.g., *titaunā*, *prauga*, *tvam* > *tuam*, OP. *tuam*, Gk. *tunē*, *kva* > *kua*. This is not possible in classical Sanskrit. In the sūtra literature occasional departure from the grammarian's norm is found in the removal of hiatus by crasis in the following form : *patnyāñjalāu* from *patnyā(h) añjalau* (KauS. 6.17), *daivateti* from *daivata iti* < *daivate iti* (KauS 6.34).

In the early Vedic stage sandhi was not very rigid like the classical Sanskrit. But some sort of rigidity began to appear in the late Vedic stage. For example, the sandhi of *āu* becomes *āv* before all vowels except *u* or *ū*, when it becomes *ā*. The

same rule is found in the Brāhmaṇa period as well as in the Āraṇyaka.

The *abhinihita-sandhi*, i.e., merging of initial *a* into the preceding *e* or *o* becomes more frequent in Vedic, but not in classical; e.g., *samāno adhvā* (RV. II.13.2). From the late vedic stage *a* started disappearing, e.g., *sa agacchat* becomes *so'gacchat*. From the classical period this elision of *a* after *e* or *o* became a regular feature.

In the prose passages of the Upaniṣads, sandhi is almost more regular like classical Sanskrit than the metrical portions. There are some irregularities in the verses.

Morphology : The morphology of Vedic language does not differ much from that of classical Sanskrit with which we are familiar. The declension of Vedic word is like that of Sanskrit. But in some cases some variations are noticed, some more forms are available in Vedic. Thus in declension a number of forms has been dropped in classical Sanskrit.

Compounds of more than two or three words which are rare in the Saṃhitās and in the Brāhmaṇas, are frequent in classical Sanskrit.

The nom. and acc. dual forms of *a*-base end in *ā*, e.g., *narā* (Vedic), Cl. *narāu*. This ending *-ā* is found even in a *dvandva* compound like *mitrā-varuṇā* in the sense of *mitrā-varuṇāu*.

In Vedic the nom. pl. of *ā*-stem ends in *-āsah*, Av. *āōñhō*, OP. *āha* (as in *aniyāha bagāha*, 'the other gods') which is a double pl. suffix *as + as > āsas* (cf. Pā. *ājjaser asuk* || VII.1.50). This is totally lost in classical Sanskrit, e.g., Vedic *janāsaḥ*, *devāsaḥ*, Cl. *janāḥ*, *devāḥ*. But even in the RV this ending became archaic, as also in Avestan and OP. Though their ending was ultimately dropped out both in Vedic and classical, a few remnants were found in the *Kāthopaniṣad*, e.g., *etam agnim tavāiva pravakṣyanti janāsaḥ* (1.19). This ending is preserved in Pāli Gāthās as *-āse* (*devāse*).

Nom. pl. in *ā* of neuter nouns ends in *a* e.g., *tri ca śatā tri ca sahasrā* (Bṛh. III.9.1).

Nom. pl. in *īs* of fem. nouns ends in *ī* e.g., *mānuṣīḥ* (Taitt. III.10.2)

The nom. pl. of *patnī* is given as *patnayaḥ* in the *Bṛhaddevata*.

The nom. pl. *gāḥ* is found in *ĀpŚS* (10.26.7).

The ins. pl. form of *a*-base ends in *ebhiḥ* ; e.g., *devebhiḥ*.

Ins. sg. in *ā* of fem. noun ends in *ā*, e.g., *deśā* (Chā. VI.13.1), *manasā* (Śve. III.13).

Instrumental sg. *vidyā* occurs in *ĀpDhS*. (I.11.30.3) and *dāra* (*ĀpDhS*. II.1.17-18).

The dat. sg. of feminine nouns ending in *ā*, *ī*, and *ū* has an ending *-ai*, as in *dakṣiṇāyāi* (*ĀpŚS*. II.8.3)

In declension the shortening of a long vowel before termination is found in *patnibhis* (*ĀpŚS*. 14.15.2), *grāmaṇibhis* (*ĀpŚS*. 20.4.3).

The loc. sg. is used without terminations of nouns ending in *an* e.g., *akṣan* (Bṛh. II.2.2), *ātman* (Bṛh. II.3.6 ; Kaṭh. II.4.1 ; *ĀpŚS*. 6.28.20 ; *KauS*. 72.42), *vyoman* (Taitt II.1) *ahan* (*ĀpŚS*. 9.2.1), *dhāman* (*BauŚS*. 10.5), *carman* (*BauŚS*. 6.28.17-18).

Some forms of the first personal pronoun, such as, *mahya*, *vām*, *asme*, *āvad* (TS) are lost in classical Sanskrit.

yuvad and *yuvam* are abandoned in preference to *yuvām*. The form *tyat* is very common in Vedic till the time of the Upaniṣads (cf. *tyat* in Bṛh. II.3.1).

In Vedic literature the augment is very often elided, whereas in classical Sanskrit it is not elided except the forms with the prohibitive particle *mā*, e.g., *mā bhāṣiḥ* for *abhāṣiḥ*. The unaugmented forms occur very often in the *Bṛhaddevatā*, e.g., *sīdat* (IV.113), *bodhayat* (IV.115).

The verbal terminations *masi* and *dhva* which are used side by side with *mas* and *dhvam* in the Vedic, have disappeared in classical Sanskrit.

The imperative *dhvāt* and *dhi* which are frequently used in Vedic side by side with *hi*, are also lost with the exception of stray forms like *juhudhi*. The forms like *gahi* are not found in classical Sanskrit.

Imperatives with *tāt* are found twice in the Upaniṣads ; *ayaṃ tyasya rājā mūrdhānam vipātayatāt* (Bṛh. I.3.24), *abhayaṃ tvā gacchatād yājñavalkya* (Bṛh. IV.2.4).

The ātmanepada and parasmaipada are not restricted to certain roots as in classical Sanskrit ; e.g., *adhyeti*, *adhyeṣi* (Chā. VII.2.6), *adhihi* (Chh. VII.1.1.), *manvāni* (Chā. VIII.12.5), *aikṣat* (Kaṭh. II.4.1).

The forms *ādadāti* (and *dadāti*) for *ādatte* occur in the *Vaikhānasa-smārta-sūtra* (9.2.4).

The *r* of the third person plural perfect, which was seen even in other tenses, e.g., *avasran*, *adṛśran*, has almost disappeared in classical Sanskrit, except in the forms of *śi* and those of ātmanepadi of 3rd pl. perfect.

The optative in *īta* is also met with in the sūtra lit. : *dayīta* (ĀpŚS. 5.25.18), *prakṣālayīta* (ĀpDhS. I.1.2.4), *dhārāyīta* (MGS. I.1.10), *kāmāyīta* (BauŚS. II.1), *upanayīta* (KauS. 17.31.31).

The optative pl. *īran* is also found in the sūtra lit. *upakal-payīran* (BauŚS. 25.12).

The verbal derivatives like *avas*, *darśata*, *mṛṣika*, *vabhri*, etc., are unknown in classical Sanskrit.

Moods of different stem-systems (present, perfect, aorist) are profusely found in the early Vedic literature, such as *ciketati*, *murmurat* for perfect subjunctive, *stoṣāṇi*, *neṣati* for aorist subjunctive, *jagamyām*, *riricyām* for perfect optative, *gameyam*, *dṛṣeyam* for aorist optative. But all these moods of perfect and aorist are lost in classical Sanskrit.

The subjunctive mood is one of the chief features of the Vedic language, particularly in the Ṛgveda and Atharvaveda. It is comparatively rare in the Brāhmaṇas and Āraṇyakas. But in classical Sanskrit it is lost, except a few fragments, such as, the imperative first person (*bhavāmi*), and the imperfect (*lañ*) and aorist (*luñ*) without the augment after the prohibitive particle *mā* ; e.g., *mā bhāṣiḥ*. The subjunctive is almost lost in later Vedic texts. Only a few subjunctive forms have survived in the Upaniṣads ; e.g., *asat* (Bṛh. V. 5.1), *icchāsat* (Bṛh. VI. 1.10), *prapam* (Bṛh. V.14.7), *upa sīdathāḥ* (Chā. VI.13.1)

The conditional seems to be a later development. In the RV only one example (*a-bhar-i-ṣyat*) is found and none in the other Vedic texts. In the ŚB there are only fifty instances, but in the other Brahmaṇas and the Āraṇyakas, there is none. In the *Mahābhārata* it occurs twentyfive times from thirteen roots. In the *Śakuntalā* there are only two instances—*abhaviṣyat* and *akariṣyat* (VII. 4), but in the *Gīta*, *Hitopadeśa*, and other classical texts, the conditional is practically absent.

The injunctive is mainly found in the vedic, but in classical Sanskrit it is lost, while only one type (*mā bhāṣiṣi*) has survived.

Vedic infinitives differ widely from the classical Sanskrit. In Vedic period no less than fifteen forms of infinitive, such as, *am*, *e*, *i*, *se*, *ase*, *kase*, *adhyāi*, *kadhyāi*, *śadhyāi*, *tave*, *mane*, *vane*, *tari*, *sani*, *tum*, are used, of which only one *tum* survives in the classical period; e.g., *yudh-am*, *dī-śe*, *cakṣāse*, *etave*, *gamadhyāi*, *dā-vane*, *saṃcakṣ-i*, etc.

According to Pāṇini the perfect participial suffixes *kvasu* (= *vas*) and *kānac* (= *āna*) are used in place of perfect (*liṭ*) in the Vedic language only [*chandasi liṭ* // III.2.105 : *liṭaḥ kānaj vā* // III. 2. 106 ; and *kvasuśca* // III. 2. 107] ; e.g. ; *samānaṃ cid rathan ātasthivāṃṣā* (RV.II.12.8), 'two mounted on the self-same chariot', *irmā tasthuṣir ahabhir dudurhre* (RV. V.62.2), 'standing still are milked day after day. Pāṇini has not sanctioned these suffixes for classical Sanskrit, except some forms like *sedivān*, *ūṣivān* and *śuśruvān*, *upeyivān*, *anāśvān* and *anūcāna* [cf. Pā. *bhāṣāyāṃ sada-vasa-śruvaḥ* // III.2.108 ; and *upeyivān-anāśvān-anūcānaśca*, III.2.109]. But poets like Kālidāsa and others have used these suffixes in their works ; e.g., *sa pāṭalāyāṃ gavi tasthivāṃsam* (Raghu II.29), 'sitting upon the rosy cow' ; *taṃ tasthivāṃsam nagaropakante* (Raghu V.61), 'halting at the vicinity of his capital' ; *śreyāṃsi sārvaṇyadhijagmuṣas te* (Raghu V. 34), 'having obtained all blessings'. On this point the remark of Bhaṭṭoji is note worthy. "*kvasu-kānacāvapi chandasāviti tri-muni-matam. kavayastu bahulam prayuñjante*. (under SK. 3095).

Absolutives in *-am*, a peculiarity often observed in the

Brāhmaṇas, are found in Śrauta literature, e.g., *anavakrām* (ĀpŚS. II. 13.7), *abhiṣekam* (BauŚS. II. 9), *ayujakāram* (Hiraṇyakeśi Piṭṛmedha sūtra. 2.1.). Other irregularities of absolutes are *ścotyā* (KauS. 53. 18), *kṣipyā* (KauS. 30.18), *tyājya* (Agnivesya GS. 3.11.2), *sāntvya* (BD. IV. 3), *saṃgrītā* (BD. II. 48)

The absolute in *tvā* is used, but those in *tvī*, *tvāya* and *tvīnam*, *tvānam* are neglected in later literature including classical.

Syntax : The syntax is strictly and severely observed in classical Sanskrit, while it is not so rigidly followed in Vedic. Only in special cases some rules are laid down for Vedic language, whereas classical Sanskrit has a large number of it. In classical Sanskrit, the present tense has only indicative, an optative and an imperative. But the subjunctive (*leṭ*) is lost in classical Sanskrit.

On the use of *upasarga*, there is a difference between the two. In classical Sanskrit *upasarga* comes immediately before the verb (cf. Pā. *te prāg dhātoḥ* || I. 4.80). This normal phenomenon is also found in the Vedic ; e.g., *yaṃ krandasī saṃyati vihvayete* (RV. II. 12.8), *vijayante janāsaḥ* (RV. II. 12.9), *avāṣṭjat sartave sapta sindhūn* (RV. II. 12.12). But in Vedic it does not necessarily come immediately before the verb, some word or words may intervene between the *upasarga* and the verb (cf. Pā. *chandasi pare'pi* || I.4.81) ; e.g., *ā ye tanvanti raśmibhiḥ* (RV. I.19.8), *pari dyāvāprthivī yanti sadyaḥ* (RV. I. 115.3), *saṃ pūṣan viduṣā naya* (RV. VI. 54.1). In the Vedic the *upasarga* sometimes comes after the verb (*tmesis*) instead of coming before it (cf. Pā. *vyavahitāśca* || I. 4.82) ; e.g., *mā no ghoreṇa caratābhi dhṛṣṇu* (RV. X. 34.14).

Some examples of prepositions separated from the verbs are sometimes available in the Upaniṣds, e.g., *parā asya bhrātṛvyo bhavati* (Bṛh. I. 3.7), *ud asmāt grāṇāḥ krāmanti* (Bṛh. II. 1.11), *anu mā śādhi* (Bṛh IV. 2.1) *ā ca gaccheyur upa ca nameyuh* (Cha. II 1.4).

The repetition of the same *upasarga* is one of the features in Vedic, but not in classical, e.g.,

ni grāmāso avikṣat, ni padvanti ni pakṣiṇaḥ |
ni śyenāsaś cid arthinaḥ || [RV.X.127.5]

Semantics: Semantically, there is a difference between Vedic and classical Sanskrit in the use of some words. In most of the cases the Vedic words give mostly the etymological meanings, whereas the classical does not always follow the etymological meaning. For example, *deva* in Vedic is 'shining, bright', whereas *deva* in classical is 'god'. Indian authorities derive the word from *div* to shine, whereas the Europeans generally derive it from *div* heaven which is an extended form of *dī* to shine and *deva* therefore means heavenly or celestial, and hence it came to mean God.

The word *arka* in the mantra *ya ugrā arkam āṇṛcuḥ* (1.19.4a) is translated as 'song', i.e. "the mighty one (*ugrāḥ*) that (*ye*) sang (*āṇṛcuḥ*) their song (*arkam*). " To a philologist *ark* means to 'praise', 'to sing'; hence *ark* means 'song'. So *arkam āṇṛcuḥ* means 'sang their song'. To the Indians, *arka* means 'the sun'; it is connected with the word *arcīḥ* meaning 'flame'. Sāyana considers *arka* as 'water'. He quotes from the *Śatapatha-Brāhmaṇa* (10/6/5/2) to substantiate his argument (*āpo vā arkarḥ*). The word is often connected with the Greek word ὀρχήστρα, Lat *orchestra*, meaning 'the space on which the chorus danced.' In classical Sanskrit *arka* primarily means the sun and this meaning has been handed down to the modern Indian languages.

Here it is a fact worth noting that the collocation *arkam āṇṛcuḥ* meaning "sang their song" is a cognate object. This type of usage is often found in the RV, in classical Sanskrit also we have *tapas tapyate*, *vācam uvāca* and so on. Even in Avesta we have the same type of usages; e.g., *yo narəm āgərəptəm āgəurvayeiti*. "who threatens a threat against a man". In Greek *mákhēn mákhesthai* fight a battle", *boulās bouleuouai* (Iliad. 24. 652), "take a counsel" are the examples of cognate objects.

In *kavi-kratu* (RV. 1.1.5) the meaning of *kavi* is not poet in Vedic, nor does *kratu* mean a sacrifice. *Kavi* is derived from the root *ku* meaning "to show, to observe". So *kavi* means "wise, intelligent" and then a "poet", *kratu*, Gk. *kratos* meaning "strength of mind" is derived from the root *kṛ* (in the weak grade form) which means "to have the power to

do; hence "power, strength, might". In Avestan *xratu* (Mod. Persian *xirad*) also means "strength of mind". Thus *kavi-kratu* means "of wise intelligence". Sāyana, of course, has taken the word in the sense of "the attainer of skill in rituals" (*kavi-śabdo'tra krānta-vacana, na tu medhāvi-nāma*). i.e., *kavi* means "attainer of skill" and *kratu* means "rituals". Geldner takes it to mean "possessed with the temper or sense of a seer", *kavi*=seer and *kratu*=sense or temper. Sāyana in other places has given the meaning as "possessed with knowledge of all things" (RV. III. 14.7). *Kratu* in many places means knowledge which is also sanctioned by Yāska who says *kratu* means *prajñā* "experience". However, *kavi-kratu* as a Bahuvrihi compound means "one who has the intelligence of a *kavi* or seer." In a similar way, *śata-kratu* means "one whose power or insight is like that of a hundred." But in classical Sanskrit *kavi* normally means "a poet" and *kratu* is a sacrifice (*yāga*). The Vedic sense has not survived in classical Sanskrit.

The word *dhenā* (1.2.3) is another Vedic word whose original meaning is lost in classical Sanskrit. In the RV *dhenā* is used in several places, at least, in six different meanings: (i) *dhenā* means speech (*vāk*) under RV. 1.2.3; (ii) *dhenā* means a beloved woman (*prīṇayitrī*) under RV. V. 30. 9; (iii) *dhenā* means sister (RV. III. 34.3); (iv) *dhenā* means a cow, a female animal (RV. III. 34.3); (v) *dhenā* means the tongue (RV. VII. 24.2); and (vi) *dhenā* means praise (*stuti*) (RV. VIII. 32. 22).

In fact, the Vedic word *dhenā*, AV. *daēnā*, Lithuanian *dainā*. Latvian *daina* are all connected. From this equation, an IE word **dhainā* can be postulated. The root of this word is IE **dhi*, **dhi-ei*, **dhei* meaning "to think, to ponder over, to give thought to." In consideration of the Baltic word, *dhenā* means speech, voice, words, praise, prayer, songs etc.

In this way, there are many Vedic words which have not come down to classical Sanskrit, and there are some which have lost their Vedic meanings and acquired some new meanings in classical Sanskrit. The difference between Vedic and classical Sanskrit in this regard is also immense.

PHONOLOGY

CHAPTER ONE

The Indo-European Sound-system and its development in Old Indo-Aryan.

§1. The Indo-European Sound-system

By a comparison of Sanskrit, Greek, Latin, Gothic and other Indo-European (= IE) cognate languages, it is presumed that the IE had the following sound-system.

A. The Indo-European Vowels :

I. Simple Vowels : Short Long Reduced/Neutral/Schwa

<i>a</i>	<i>ā</i>	<i>ə</i>
<i>e</i>	<i>ē</i>	
<i>o</i>	<i>ō</i>	
<i>i</i>	<i>ī</i>	
<i>u</i>	<i>ū</i>	

II. Sonants/Vocalics

liquids

<i>r</i>	<i>ṛ</i>
<i>l</i>	<i>ḷ</i>

nasals

<i>ṇ</i>	<i>ṅ</i>
<i>m</i>	<i>ṁ</i>

III. Diphthongs

<i>ai</i>	<i>āi</i>	<i>ei</i>
<i>ei</i>	<i>ēi</i>	
<i>oi</i>	<i>ōi</i>	
<i>au</i>	<i>āu</i>	<i>eu</i>
<i>eu</i>	<i>ēu</i>	
<i>ou</i>	<i>ōu</i>	

Some accept two more schwas—schwa secundum *ə*₁ and schwa tertium *ə*₂ for which see below § 3(iii).

B. *The Indo-European Consonants :*

			Guttural Series			Dentals	Labials
			Palatals	Velars	Labio-velars		
Stops (Mutes) (Plosives) (Implosives) (Explosives) (Occlusives)	Voiceless (Tenues) (Surd) (Hard)	unaspirated	\hat{k}	q	q^u	t	p
		aspirated	$\hat{k}h$	qh	q^uh	th	ph
	Voiced (Mediae) (Sonant) (Soft)	unaspirated	\hat{g}	g	g^u	d	b
		aspirated	$\hat{g}h$	gh	g^uh	dh	bh
		nasals	\hat{n}	\dot{n}	\hat{n}^u	n	m
Semi-vowels	(i) liquids	voiced	\dot{l}				y
	(ii) rolled (lateral)	voiced				$r\ l$	
Sibilants (Spirants) (Fricatives)	Voiceless					s	

Some scholars postulated some other IE sounds. These are—

Spirants :	Voiceless	Voiced
Velar	x	γ
Palatal		j
Dental	$\bar{p} (\theta), \bar{p}h$	$\bar{\sigma} (\delta), \bar{\sigma}h$
Labial	f	v
Sibilant	sh	z, zh

Kozlovskij assumes an IE χ and Von Fierlinger an IE γ in order to prove OIA h corresponding to Greek γ . The IE spirant j is also accepted for Greek z corresponding to OIA y (OIA. *yugam*, Gk. *zugón*). Brugmann presupposes $\bar{p} \bar{p}h$, $\bar{\sigma} \bar{\sigma}h$, and also sh and zh from s . In a similar way f and v are also postulated. Osthoff assumes spirant voiced sibilant z in IE in order to explain some Greek forms with z sounds, e.g.,
 * $i\check{z}d > *i\check{s}d > \text{OIA } i\check{d}, i\check{d}yah$, Gk. *aidomai* (< **qizdomai*, cf. *aidoios*), Goth. *aistan*.

* $nizdos > \text{OIA } n\check{i}dah$, Lat. *nīdus*, OHG. *nest*, Eng. *nest*.

* $ozdos > \text{Gk. } \acute{o}zos$, Goth. *asts*, bough.

Sometimes the symbol w is put over the sound k /or q (i.e. k^w /or q^w) etc. to indicate a labio-velar sound. This is mainly for the facility of the printing. The symbol q^u etc. is adopted lately. It is easy to understand when q^u is developed into qu in Latin. Hence to use the symbol w instead of u is not scientific now.

Previously y/j and w/v were used for the semi-vowels. When these semi-vowels become vowels i and u respectively, the process is not easy to understand orthographically how y/j and $w/v > \text{change into } i \text{ or } u$. Hence the symbols \check{i} and \check{u} are preferable to y/j and w/v , at least, for OIA.

§2. Comments on Indo-European sounds

In general some of the IE sounds are lost in Old Indo-Aryan (= OIA) and some are changed and added newly.

1. The main IE sounds which are lost in OIA are the

- (a) short and long \check{e} and \check{o} ,
- (b) the neutral vowel \check{a} ,
- (c) the short and long diphthongs $\check{e}i$, $\check{o}i$, $\check{e}u$, $\check{o}u$,
- (d) the sonant nasals \check{n} , \check{m} , and
- (e) the IE spirant voiced sibilant z (if accepted).

2. The IE sounds which are changed in OIA are the

- (a) short and long vowels \check{e} , $\check{o} > \check{a}$
- (b) the neutral vowel $\check{a} > i$,
- (c) $r > \check{r}$, $\check{u}r$,

- (d) $l > r$
- (e) the short diphthongs into *e* and *o* and the long into *āi* and *āu*.
- (f) IE palatal mutes > palatal *ś* and palatal affricates.
- (g) IE velars and labio-velars > palatals under certain conditions.

3. The new sounds which are added to OIA are the cerebral series and the aspirate *h*.

4. In Greek **i* and **u* are lost, and also partially IE **s*.

5. In Latin the IE diphthongs have become obscured, and the aspirate sounds have undergone changes.

6. Some of the sibilant-cum-aspirate consonants, such as, **sph*, **sth* are found in Sanskrit and Armenian; and some sounds, e.g. *yl-* and *yr-* can be ascertained only from Sanskrit, Germanic, and Celtic.

7. The laryngeal sounds or 'breathings' are postulated on the evidence of Hittite.

§3. The Development of Indo-European sounds in OIA

A. The IE Vowels : I. The Simple Vowels :

(i) The Short Vowels.

1. The IE **a*, **e*, **o* became *a* in Indo-Iranian (= IIr) and *a* in OIA in all positions; e.g.,

IE **a* > OIA *a*

IE

- * *aġō* > OIA. *ājā-mi* (I drive), Gk. *ágō*, Lat. *agō*, Icelandic. *aka* (infinitive), Old Irish. *agim*.
- * *aġros* > OIA. (Vedic) *ājraḥ* (field), Gk. *agrós*, Lat. *ager*, Goth. *akrs*.
- * *apo* > OIA. *āpa*, YAv *apa*, OP. *apa-* (prefix), Gk. *apó*, Lat. *ab*, Goth. *af*.
- * *anti* > OIA. (Vedic) *anti*, Lith. *ānt*, Gk. *anti*, Lat. *ante*, Goth. *and*.
- * *mad* > OIA. (Vedic) *mādāmi* (I am drunk), Gk. *madaō*, Lat. *madeō*.
- * *sqandō* > OIA. *skándāmi* (I spring), Lat. *scandō*.

IE *e>OIA a

IE

- * *esti*>OIA. *asti*, OP. *astiy*, Lith. *esti*, Gk. *esti*, Lat. *est*, Goth. *ist*.
- * *esmi*>OIA. *asmi*, Arm. *em*, Gk. *eimí*, Lat. *sum*, Goth. *im*, Eng. *am*.
- * *ébherom*>OIA. *ábharam*, OP. *ábaram*, Gk. *épheron*.
- * *nebhos*>OIA. *nabha-s*, Gk. *nephos*, Lat. *nebula*, OHG. *nebul*.
- * *bherō*>OIA. *bharā-mi*, Gk. *pherō*, Lat. *ferō*, Goth. *ga-bairan*, AS. *ge-beran*, Eng. *bear*.
- * *bheresi*>OIA. *bharasi*, Arm. *beres*, Goth. *bairis*, Eng. *bearest*.
- * *ekṣā*>OIA. *aśvā*, cf. Gk. *hippos*, Lat. *equā*.

IE *o>OIA a

IE

- * *apo*>OIA. *apa*, OP. *apa*, Gk. *apo*, Lat. *ab*, Goth. *af*.
- * *aṅros*>OIA. (Vedic) *ajrah*, Gk. *agrōs*, Lat. *ager*, Goth. *akrs*.
- * *ebherom*>OIA. *abharam*, OP. *abaram*, Gk. *épheron*.
- * *nebhos*>OIA. *nabhas*, Gk. *nephos*, Lat. *nebula*, OHG. *nebul*.
- * *opos*>OIA. *apas*, Lat. *opus*, *work*.
- * *dedorke*>OIA. *dadarśa*, Gk. *dēdorke*.
- * *dōmo-s*, **domuṣ*>OIA. (Vedic) *dāmas*, a house, cf. OIA. *dampatī*, Av. *dam*, Gr. *dōmos*, Lat. *domus*.
- * *uīros*>OIA. *vīras*, Lat. *vīr* (*vis*), Goth. *wer*, Old Irish *fer*.
- * *ulqṛos*>OIA. *vṛkas*, Lith. *vil̃kas*, Gk. *lukos*, Lat. *lupus*, Goth. *wulfs*, Old Eng. *wulf*.
- * *pro*>OIA. *pra*, OP. *fra*, Gk. *prō*.

2. The IE *i* remained *i* in -IIr and in OIA, as also in Greek ; e g.,

IE *i>OIA i

IE

- * *idhi*>OIA. (Vedic) *idhi*>Cl. *ihī*, Gk. *it̃hī*.
- * *id-*>OIA. *id-am*, Lat. *id*, Goth. *it-a*.
- * *peri*>OIA. *pari*, Av. *pairi*, OP. *pairiy*, Gk. *perī*, Lat. *per*, Goth. *fair-*.

IE

- * *proti* > OIA. *prati*, Gk. *proti*.
- * *dvi* > OIA. *dvi*, Gk. *di*-, Lat. *bi*, OE. *twi*, Eng. *two*.
- * *pibō* > OIA. *pibā-mi*, Lat. *bibō*, Old Irish. *ebaim*.
- * *anti* > OIA. (Vedic) *anti*, Lith. *ānt*, Gk. *anti*, Lat. *ante*, Goth. *and*.
- * *esti* > OIA. *asti*, OP. *estiy*, Gk. *ēsti*, Lat. *est*, Goth. *ist*.
- * *esmi* > OIA. *asmi*, Gk. *eīmi*, Goth. *im*, Eng. *am*.

3. The IE *u* remained *u* in IIr and also in OIA, and also in the oldest Greek ; e.g.,

IE **u* > OIA *u*

IE

- * *kludhi* > OIA. (Vedic), *śrudhi*, Gk. *kluthi*.
- * *klutos* > OIA. *śrutas*, Gk. *klutos*, Lat. *in-clutus* (renowned).
- * *medhu* > OIA. *madhu*, Lith. *midūs*, *medūs*, Slav. *medū*. Gk. *methu*, Lat. *medius*, Goth. *medjis*, Germ. *meth*, Eng. *mead*.
- * *dhuḡhātēr* > OIA. *duhitā*, Lith. *dukte*, Gk. *thugātēr*, Goth. *daúhter*, Eng. *daughter*.
- * *bhāḡhus* > OIA. *bāhus*, Gk. *pēkhuīs*, Doric *pākhus*, OHG. *boug*.
- * *nu* > OIA. *nu* (now), Gk. *nu*, Goth. *nu*.
- * *uta* > OIA. *uta*, Av. *uta*, OP. *utā*, cf. Gkt. *ēute* > *ute* (as).
- * *putlo* > OIA. *putrá*, Av. *puθra*, OP. *puṣa*, OChSl. *pučlo*.
- * *jugom* > OIA. *yugám*, Gk. *zugón*, Lat. *jugum*, Goth. *juk*, Eng. *yoke*.

(ii) The Long Vowels

4. The IE **ā*, **ē*, **ō* became *ā* in IIr and also *ā* in OIA in all places ; e.g.,

IE **ā* > OIA. *ā*

IE

- * *āḡis* > OIA. *āji-s* (race, contest). Another form of it is *ājas* found in *samājas*, 'meeting, company', which can be compared with Gk. *agós* in *strātēgós* < *stratagós* < *stratos* + *āgós*, 'the leader or commander of an army.'

- * *bhrātēr* > OIA. *bhrātā*, OP. *bratā*, Gk. *phrātēr* (clan brother), Lat. *frāter*, Goth. *brōpar*, AS. *brōðor*, Eng. *brother*,
- * *bhāghus* > OIA. *bāhūs* (arm), Gk. *pēkhus*, Doric. *pākhus*, OHG. *boug*.
- * *mātēr* > OIA. *mātā*, OP. *mātā*, Lith. *motė*, Gk. *mētēr*, Doric *mātēr*, Lat. *māter*, OHG. *muoter*.
- * *sthā* > OIA. *tiṣṭhāmi*, Gk. *histēmi*, Doric *histāmi*, Lat. *stāre*.
- * *ekvā* > OIA. *aśvā*, OP. *aspā*, Lith. *ašvā* (mare), cf. Gk. *hippos*, Lat. *equā*, AS. *eoh*, Old Irish. *ech*, Tokh. *yakwe*, *yuk*.

IE *ē > OIA ā

IE

- * *edhēt* > OIA. *ādhat*, OP. *adā*, Gk. *éthēke*, Lat. *fē-cit*.
- * *dhē* > OIA. *dadhāmi*, Gk. *tithēmi*.
- * *mātēr* > OIA. *mātā*, OP. *mātā*, Lith. *motė*, Gk. *mētēr*, Lat. *māter*, OHG. *muoter*.
- * *pātēr* > OIA. *pitā*, Av. *pitā*, OP. *pitā*, Gk. *patēr*, Lat. *patēr*, Goth. *fadar*, Old Irish. *athira*.
- * *bhrātēr* > OIA. *bhrātā*, OP. *bratā*, Gk. *phrātēr* (clan brother), Lat. *frāter*, Goth. *brōpar*, AS. *brōðor*, Eng. *brother*.
- dhughatēr* > OIA. *duhitā*, Lith. *dukte*, Gk. *thugatēr* Goth. *daúhter*, Eng. *daughter*.

IE *ō > OIA ā

IE

- * *neptōts* > OIA. *napāt*, OP. *napā*, Lat. *nepō-s*.
- * *pibō* > OIA. *pibāmi*, Lat. *bibō*, Old Irish. *ebaim*.
- * *dōno-m* > OIA. *dānam*, Gk. *dōron*, Lat. *dōnum*.
- * *agō* > OIA. *ajā-mi*, Gk. *agō*, Lat. *agō*, Icelandic. *aka* (infinitive), Old Irish. *agim*.
- * *bherō* > OIA. *bharāmi*, Gk. *pherō*, Lat. *ferō*, Goth. *haira*.
- * *ekmōn* > OIA. *asmānam*, OP. *asmāna* (acc.) Gk. *ākmōn* (anvil).
- * *ōkú-s* > OIA. *āśu-s* (swift), Gk. *ōkús*, Lat. *ōcior*, quicker.
- * *didōmi* > OIA. *dādāmi* (< **didāmi*), Gk. *dīdōmi*.

5. The IE long *i* remained *ī* in IIr and in OIA, as well as in Greek ; e.g.,

IE **i* > OIA *ī*

IE

- * *g^hiwo-s* > OIA. *jīvaḥ* cf. Gk. *bios*, Lat. *vivus*, Goth. *qius*, Eng. *quick*.
- * *grīwā* > OIA. *grīvā*, OChSl. *grivā*, mane.
- * *sīmen* > OIA. *sīmā(n)* (parting of the hair), cf. Gk. *hīmās* (leathern strap), OE. *sīma* (rope).
- * *uīros* > OIA. *virās* (<*vī*), Lith. *vyras*, Lat. *vir* (man), *vir-vīs* (manly strength), *virāgo* (a man-like woman), Goth. *wair*, OE. *were-wolf* (= OIA. *vīra-vṛka*)

6. The IE long *ū* remained *ū* in IIr and also in OIA, as well as in the oldest Greek ; e.g.,

IE **ū* > OIA *ū*

IE

- * *dhūmos* > OIA. *dhūmas*, Lith. *dūmai* (pl), Gk. *thūmos*, Lat. *fūmus*.
- * *mūs* > OIA. *mūṣ-ika* (mouse), Gk. *mūs*, Lat. *mūs*, OHG. OE. *mūs*, Eng. *mouse*.
- * *kūros* > OIA. *śūraḥ*, Gk. *a-kūros* (not valid).
- * *nū* > OIA. *nū-tana*, Av. *nū*, Gk. *nūn*.
- * *bhūmi-* > OIA. *bhūmi-m*, OP. *būmī-m* (acc.)
- * *dūra* > OIA. *dūra*- (far), OP. adv. *dūrai-* (afar).
- * *ebhūtom* > OIA. *abhūtam*, cf. Lith. *būti* (to be), Gk. *ephūton*.
- * *bhūtis* < **bhū*, **bheyā* > OIA. *bhūtis* (being, prosperity), Gk. *phūsis*.

(iii) The Indo-European Neutral vowels/schwa/diaphone

7. Phonetically *schwa* is an indistinct vowel, i.e., it is the indeterminate vowel sound or sounds of most unstressed syllables. It is a mid-central neutral vowel whose phonetic symbol is represented by *ə*. The name has come from a Hebrew word *shewa* meaning thereby the name of a point marking want of a vowel sound. In fact, the name suggests the shortest possible indistinct vowel found in Semitic, and Hebrew in particular. The Indian term *ardha-mātrā* can be

used to refer to this sort of vowel. In the parent IE language this neutral vowel (= schwa) is postulated, and it has, at least, two varieties, if not more—schwa *primum* and schwa *secundum*, and some add schwa *tertium* also, and are represented by the symbols— ə , ə_1 , ə_2 respectively.

The neutral vowel ə is normally the accepted one in IE. This neutral vowel might have come from a reduction or weakening of long vowels \bar{a} , \bar{e} , \bar{o} caused by the loss of accent.

The IE schwa ə became *i* in IIr and in OIA, but *a* in all other cognate IE languages, and *o* in Old Church Slavonic, e.g.

IE *ə > OIA *i*

1E

*pətēr > OIA. *pitā*, Av. *pitā*, OP. *pitā*, Gk. *patēr*, Lat. *patēr*, Goth. *faðar*, Old Irish. *athira*.

*dhughətēr > OIA. *duhitā*, Lith. *dukte*, Gk. *thugatēr*, Goth. *daūhter*.

*anə- > OIA. *animi* (I breathe), *ani-la* (wind), Gk. *ánemos*.

*sthətos > OIA. *sthitaḥ*, Gk. *statos*.

*e-dəto > OIA. *adita* (3 p. sg. aor. mid of $\sqrt{dā}$), Gk. *édoto*.

*bherə-trom (*bheretrom) > OIA. (Vedic), *bharitram* (arm), Gk. *phéretrom*, Lat. *feretrum*.

*sedə-s > OIA. *sadana* (<*sadina), OP. *hadiš* (abode), Gk. *hédos* (<*sedos) 'seat'.

*menə-s > OIA. *manas* (<*manis), OP. *maniš* (personal name), Gk. *ménos*, vigour.

dālgħos , *dīgħos > OIA. *dīrghas*, Gk. *dolikhos*, Lat. *indulgeō*.

*dhətos > OIA. (Vedic) *dhitas*, > Cl. *hitas*, Av. *dāta*, OP. *dāta*, Gk. *thetos*, Lat. *con-ditus*, *cre-ditus*.

8. The other two schwas ə_1 and ə_2 are not generally accepted. Some say that ə_1 is a reduction of *e*, and ə_2 is a reduction of *o*, but their origin from the reduction of *e* and *o* is doubtful. However, those who accept them, give the following equation which could equally come from ə ; e.g.,

IE * ə_1 > OIA *i*

IE

* $\text{gh}\text{ə}_1\text{leni}o$ > OIA. *hiranya*, Av. *zaranya*, OP. *daraniya* (gold).* $\text{ek}\text{ə}_1\text{rii}onto$ > OIA. *akriyanta*, OP. *akariyantiā*.* $\text{g}\text{ə}_1\text{ri-s}$ > OIA. *giris*, Lith. *giria*, OChSl. *gora*.IE * ə_2 > OIA *u*

IE

* $\text{p}\text{ə}_2\text{ros}$ > OIA. *purās*, OP. *paras*, Gk. *páros*, Goth. *faúra*.* $\text{p}\text{ə}_2\text{lu-}$ > OIA. *purú*, OP. *paru-*, Gk. *polús*.

II. The Indo-European Sonants in OIA.

(also called Resonants, Semi-consonants)

9. The IE sonant liquids and nasals, both short and long, are \tilde{r} , \tilde{l} , \tilde{n} , \tilde{m} . They were postulated in IE mainly on the basis of Sanskrit and Greek, and partly on the basis of Latin, Gothic and other languages.

In 1876 Karl Brugmann (1849-1919) in his article, *Nasalis sonans in der indogermanischen Grundsprache*, published in *Curtius' Studien zur griechischen und lateinischen Grammatik* (Vol. IX, pp. 287-338) postulated that *r*, *l*, *n* and *m* had vocalic functions without any vowels. On the basis of Brugmann we assume today the vocalic qualities of *r*, *l*, *n* and *m* as \tilde{r} , \tilde{l} , \tilde{n} and \tilde{m} both their short and long forms.

Sanskrit had already syllabic \tilde{r} (as also \tilde{l} though very rare), and naturally syllabic \tilde{r} (as also \tilde{l}) was not something new. This syllabic \tilde{r} is also preserved in the oldest and modern Slavonic languages. Before Brugmann there were scholars who gave hints that these sounds belonged to the parent language. In 1837 Theodor Benfey (1809-81) while reviewing Pott's *Etymologische Forschungen* and Hermann Ebel (1820-75) in 1852 pointed out the existence of these sounds in parent language. But August Schleicher (1821-68) in his *Compendium der vergleichenden Grammatik der indo-germanischen Sprachen* (1861-62) did not take any note of it. Schleicher did not

accept the theory that the parent language had any weak grade r of a complete syllable, rather, he thought that the vowels in the parent language were all "undamaged". This problem was again taken up by G. Humperdinck (Siegburg) in 1874 in a school programme, by the Slovenian F. Miklosich (1813-91) in 1875 and by Hermann Osthoff (1847-1909) in 1876. However, the existence of these sounds got its currency after the pronouncement of Karl Brugmann in 1876, and particularly the idea of a syllabic n and m was quite new.

In order to distinguish consonants r , l , n , m from the corresponding vowel qualities the sonant liquids and nasals are written r , l , n , m . These sounds occurred originally in unaccented syllables only. "They arose in the parent language through the loss of a preceding (rarely following) vowel. This loss was caused by the shifting of the principal accent from the syllable originally containing the vowel to some other syllable in the word." (Wright p. 32). The manner in which consonants turn into vocalic is the same with the manner as consonantal i and u became vocalic after the loss of e in combination with ei and eu .

The IE short and long vowels \tilde{a} , \tilde{e} , \tilde{o} bear the original principal accent, whereas the short and long vowels \tilde{i} , \tilde{u} , and the neutral $\tilde{ə}$ and so also the sonants r , l , n , m did not bear the original principal accent of the word.

The short vowels i , u , and the sonants are the results of the loss of e in the strong grade forms which has resulted in shifting the principal accent to some other syllables.

Though there are cases, such as, OIA. *saptá*, Gk. *heptá*, Lat. *septēm* from IE **septn̥(m)* < older IE **séptem*, and OIA. *vṛkas*, Gk. *lukos*, Lat. *lupus*, Goth. *wulfs* (< **wúlfs*) from IE **ul̥qʷos* (< older **ul̥qʷós*), where accent belongs to the sonant nasals and liquids, these are not to be regarded as bearing the original accent of the IE, but may be regarded as an analogical extension which acted for the principal accent.

(i) *The IE Short Sonants*

The development of the IE short sonants in OIA is shown below :

IE	Iir	OIA	Av	OP	Gk	Lat	Goth
<i>r</i>	<i>r</i>	<i>r</i> (ir/ur)	<i>arə</i>	<i>r</i> written ra/ar	<i>ar</i> <i>ra</i>	<i>or</i> (ur, ar)	<i>ur</i> (ru)
<i>l</i>	<i>r</i>	<i>r</i> (ir/ur)	<i>arə</i>	<i>r</i> written ra/ar	<i>al</i> <i>la</i>	<i>ol</i> (ul, al)	<i>ul</i> (lu)
<i>n</i>	<i>a</i> <i>an</i>	<i>a</i> (an)	<i>a</i>	<i>a</i>	<i>a</i> (an)	<i>en</i>	<i>in</i> (an)
<i>m</i>	<i>a</i> <i>am</i>	<i>a</i> (am)	<i>a</i>	<i>a</i>	<i>a</i> (am)	<i>em</i>	<i>um</i> (am)

(a) *Short Sonant liquids*

The sonant liquids *r*, *l* are developed in two ways in OIA depending on their position in the word.

1. Before consonants IE *r* and *l* became *r* in OIA and *ar*, *al* or *ra*, *la* in Gk., and
2. Before vowels, IE *r* and *l* became *ir* or *ur* in OIA and *ar*, *al* in Gk. For example,

1. Before consonants IE **r* > OIA. *r*

IE

* *qr̥p* > OIA. *kṛp*-(appearance), Lat. *corpus*.

* *r̥gnto* > cf. OIA. *rajaṭam*, OP. *ardata*, Av. *ərəzata*, cf. Gk. *ārguros*, Lat. *argentum*.

* *r̥neumi*, **r̥numai* > OIA. (Vedic) *r̥nōmi* (I rise, I go), Gk. *ōrnūmi*, *arnumai*.

* *r̥sen* > OIA. *r̥ṣa-bhās* (bull), Gk. *arsēn*, *arrēn*.

* *m̥nāmi*, **m̥nāmai* > OIA. *m̥ṇāmi* (I crush), Gk. *márnamai*.

* *dh̥rs-neumi* > OIA. *dh̥r̥ṣṇōmi* (I dare), cf. Gk. *thrasus*, *tharreō*, Goth. *gadaúr̥san* (to dare).

IE

* *mrtos* > OIA. *mṛtaḥ*, cf. Gk. *ámbrōtos*, OHG. *mord*, cf. OIA. *mṛtyu-s*, *mṛtis* (death), Lat. *mors*, OIA. *mriyate*, Lat. *morior*.

* *pr̥ksqhēti* > OIA. *pr̥cchati*, Lat. *poscit*, cf. OHG. *forsecōn*.

* *r̥qthos* > OIA. *r̥kṣas*, Gk. *arktos*, Lat. *ursus*.

Before Consonant IE **l̥* > OIA. *ṛ*

IE

* *ul̥qʷos* > OIA. *vr̥kaḥ*, Lith. *vilkas*, Gk. *lukós*, Lat. *lupus*, Goth. *wulfs*.

* *pl̥thus* or **pl̥they* or **pl̥othu* or **pl̥ótu* > OIA. *pr̥thus* (wide), Lith. *platus*, Gk. *plátus*.

* *l̥k̥io-s* > OIA. *ṛśya-s* (the male antelope), Arm. *eln*, Lith *elnis*, OChSl. *jeleni*, Russ. *losi*, Lat. *alces*, Icel. *elgr*, AS. *eolh*, OHG. *elaho*.

2. Before vowels IE **r̥*, **l̥* > OIA. *ir* or *ur*.

IE

* *k̥ras* > OIA. *śiras* (head), Gk. *kárā*.

* *gʷr̥ús* > OIA. *gurús* (heavy), Gk. *barús*, Goth. *kaúrús*.

* *pros* > OIA. *puráh* (before), Gk. *páros*, Goth. *faúra*, OE. *fore*.

Examples of *l̥* becoming *ir* or *ur* are not practically available. But examples of IE **l̥* > OIA. *ul* can be traced in some examples; e.g., OIA. *kulāyam*, Gk. *kaliā* (hut, nest), and OIA. *tulā* (balance), Gk. *tálās* (enduring), Goth. *pulan*, OE. *folia* (suffer, endure), Old Irish. *talla* (he takes away).

(b) Short Sonant nasals.

The sonant nasals *ṇ*, *ṁ* are also developed in two ways in OIA depending on their position in the word.

1. Before consonants (and also finally) IE **ṇ* and **ṁ* became *a* in OIA and also in Gk., and

2. Before vowels and semi-vowels IE **ṇ* and **ṁ* became *an* and *am* in OIA and Gk. Some scholars prefer **ṇn* and **ṁm* before vowels and **ṇ* and **ṁ* only before semi-vowels. For example,

1. Before consonants and finally IE * η and * η > OIA. *a*IE * η > OIA *a*

IE

- * *septn*, **septm* > OIA. *saptá*, Gk. *heptá*, Lat. *septem*, Goth. *sibun*.
- * *tntós* > OIA. *tataḥ*, Gk. *tatós* (stretched), Lat. *tentum*.
- * *rṅnto-* > Cf. OIA. *rajatam*, OP. *ardata*, Av. *ərəzata*, Lat. *argentum*.
- * *ṇ-mrtos* > OIA. *amṛtas*, Gk. *ámbrotos*.
- * *mntos* > OIA. *mataḥ*, Gk. *autó-matos*, Lat. *mentis*, Goth. *munds*, Eng. *mind*.
- * *neun* > OIA. *nava*, Gk. *ennéa*, Lat. *novem*, Goth. *niun*.
- * *dnḱéti* > OIA. *daśati*, Gk. *daknō*, *édakon*.
- * *-ṇs* (acc. pl. ending of consonantal stems) > OIA. *as*, Gk. *as*, Lat. *ēs* (<ens), Goth. *uns*.

*IE * η > OIA. *a*

IE

- * *kmtom* > OIA. *śata*, Av. *satəm*, OP. *θata-guš*, Lith. *szimtas*, OChSl. *sūto*, Russ. *sto*, Gk. *he-katon*, Lat. *centum*, Goth. *χund* (= *hund*), OE *hund-*, Eng. *hundred*, Old Irish *cet*, Welsh. *cant*, Tokh. *kand(e)*.
- * *dekm* > OIA. *daśa*, Av. *daha*, ModP. *dah*, Lith. *dėszimt*, Arm. *tasn*, Alb. *dhjetë*, Gk. *deka*, Lat. *decem*, Goth. *talhun*, Old Irish. *deich*, Tokh. *šāk*.
- * *g^hṇ-sqheti* > OIA. *gacchati*, Gk. *baske* (imperative).
- * *g^hṇ-tos* > OIA. *gatas*, Gk. *batos*, Lat. *ventus*.
- * *g^hṇ-tis* > OIA. *gatis*, Gk. *básis*, Goth. *qumþi*.
- * *sṇ-mos* > OIA. *samas* (somebody), Gk. *hamós*, Goth. *sums*.
- * *sṇ-dhe* > OIA. *saha* (with), OP. *hadā*.
- * *ēs-ṇ* > OIA. *āsa-m* (I was), OP. *āham*, Gk. *ē-a* (Homeric).
- * *ṇ* (acc. sg. ending of consonant stems) > OIA. *a-m* (*m* after the analogy of vowel stems), Gk. *a*, Lat. *em*, Goth. *-m*.

2. Before vowels IE * η > OIA. *an*

IE

- * *g^hṇā* > OIA. (Vedic) *ganā*, Gk. *banā* (Boet), Old Irish. *kona*.
- * *ṇ-udros* or **ṇn-udros* > OIA. *an-udras* (waterless), Gk. *anudros*.

IE η > OIA. *am*

IE

- * *g^hṇiō-* > OIA. *gamyāi* (opt), Gk. *baínō*, Lat. *venio*.

(ii) *The Indo-European Long Sonants*

10. The long sonants \bar{r} , \bar{l} , \bar{n} , \bar{m} are the problems in IE. As no language has preserved long sonants (liquids or nasals), the postulation of their existence is doubtful. However, on the basis of Sanskrit and Old Persian equivalents, a few examples can be cited with some probability. If it is accepted, the normal development of these sounds will be as follows :

IE	Skt	Av	OP	Gk	Lat	Goth
\bar{r}	\bar{r} , \bar{ur}		ar	$r\bar{o}$	$r\bar{a}$	ur (ru)
\bar{l}	\bar{l} , \bar{ur}		ar	$l\bar{o}$	$l\bar{a}$	ul (lu)
\bar{n}	\bar{a} (\bar{an})	\bar{a}	\bar{a}	$n\bar{a}$	$n\bar{a}$	un
\bar{m}	\bar{a} (\bar{am})	\bar{a}	\bar{a}	$m\bar{a}$	$m\bar{a}$	um

The long \bar{n} and \bar{m} became \bar{a} in Sanskrit as well as in Old Persian, whereas the long \bar{r} and \bar{l} became \bar{r} or \bar{ur} in Sanskrit and ar in Old Persian, ra , la or $r\bar{o}$, $l\bar{o}$ in Gk, and $r\bar{a}$, $l\bar{a}$ in Latin. This equation between Sanskrit and Greek has been much disputed. Examples, such as, OIA. $\bar{ur}\bar{n}\bar{a}$, Gk. $l\bar{a}nos$ (Doric), Lat. $l\bar{a}na$, and OIA. $\bar{stir}\bar{n}as$, Gk. $\bar{str}\bar{o}tos$, Lat. $\bar{str}atus$, are phonetically disputed. However, the following examples are cited for the long sonants.

IE $*\bar{r}$ > OIA. \bar{r} , \bar{ur}

IE

- * $g^h\bar{r}nos$ > OIA. $\bar{g}\bar{ir}\bar{n}ah$ (swallowed up), Lith. $\bar{g}irtas$ (drunken), Gk. $\bar{br}\bar{o}t\bar{e}r$ (devourer).
- * $st\bar{r}$ > OIA. $\bar{stir}\bar{n}ah$, Gk. $\bar{str}\bar{o}tos$, Lat. $\bar{str}\bar{a}tus$ (spread).
- * $p\bar{r}uom$ > OIA. $\bar{p}\bar{ur}vam$, OP. $\bar{par}uvam$ 'formerly'.

IE \bar{l} > OIA. \bar{l} , \bar{ur}

IE

- * $d\bar{l}ghos$ > OIA. $\bar{d}\bar{ir}gh\bar{a}s$, OP. $\bar{d}argam$ (adv), Gk. $\bar{dol}ikhos$.
- * $u\bar{l}n\bar{a}$ > OIA. $\bar{ur}\bar{n}\bar{a}$, Lith. $\bar{v}lna$, Gk. $\bar{l}\bar{a}nos$ (Doric), Lat. $\bar{l}\bar{a}na$, OE. $\bar{w}ulle$.
- * $p\bar{l}nos$ > OIA. $\bar{p}\bar{ur}\bar{n}as$, Lith. $\bar{p}lnas$ (full), Old Irish. $\bar{l}\bar{a}n$.

IE * \bar{n} >OIA. \bar{a}

IE

* $e-\bar{g}\bar{n}-n\bar{a}-t$ (he knew)>OIA. $\acute{a}j\bar{a}n\bar{a}t$ (to the root * $\bar{g}n\bar{o}$ /* $\bar{g}n\bar{o}-n\bar{a}$), OP. $ad\bar{a}n\bar{a}$.* $\bar{g}\bar{n}tos$ >OIA. $j\bar{a}taḥ$, Lat. (g) $n\bar{a}tus$ (born), Goth. $airpa-kunds$, (born of the earth).IE * \bar{m} >OIA. \bar{a}

IE

* $g\bar{u}\bar{m}-tu$ (place)>OIA. $g\bar{a}t\bar{u}$ (to the root * $g\bar{u}em$ -come), OP. $g\bar{a}ṭhu$.* $d\bar{m}\bar{i}eti$ >OIA. $d\bar{a}myati$ (he tames), Gk. $dm\bar{e}t\bar{e}r$, Lat. $domitor$, $domitus$.

III. The Indo-European Diphthongs

11. A diphthong is defined as the combination of two sounds, the two sounds being ai , au , when pronounced without any pause. In diphthong the first element is a and the second element is i or u as the case may be. The second element of a diphthong may be semi-vowels as well. The accent of a diphthong falls on the first syllable in which they occur, but if the first element is a consonant and the second a vowel, then the accent falls on the second. If the accent is on the first element, the diphthong is a falling diphthong, if it falls on the second, it is a rising diphthong.

In IE the first element of a diphthong bears the accent, e.g. $\acute{a}i$, $\acute{e}i$, $\acute{o}i$, $\acute{a}i$, $\acute{e}i$, $\acute{o}i$, $\acute{a}u$, $\acute{é}u$, $\acute{óu}$, $\acute{a}u$, $\acute{é}u$, $\acute{óu}$. Truly speaking, the combination of vowels with semi-vowels, nasals and liquids can also form a diphthong as shown below :

	Short	Long	Reduced
1. Vowels with semi-vowels	$a\bar{i}$, $e\bar{i}$, $o\bar{i}$ $a\bar{u}$, $e\bar{u}$, $o\bar{u}$	$\bar{a}i$, $\bar{e}i$, $\bar{o}i$ $\bar{a}u$, $\bar{e}u$, $\bar{o}u$	$\bar{a}i$ $\bar{a}u$
2. Vowels with liquids	ar , er , or al , el , ol	$\bar{a}r$, $\bar{e}r$, $\bar{o}r$ $\bar{a}l$, $\bar{e}l$, $\bar{o}l$	$\bar{a}r$ $\bar{a}l$
3. Vowels with nasals	an , en , on am , em , om	$\bar{a}n$, $\bar{e}n$, $\bar{o}n$ $\bar{a}m$, $\bar{e}m$, $\bar{o}m$	$\bar{a}n$ $\bar{a}m$

When the vowel element *e* is entirely lost, the second element of the diphthong became either vocal or consonantal depending on the consonant or vowel in the next syllable.

(i) *The IE short diphthongs*

The development of Indo-European short diphthongs in OIA is as follows :

IE	<i>ai</i>	<i>ei</i>	<i>oi</i>	<i>au</i>	<i>eu</i>	<i>ou</i>
Iir	<i>ai</i>			<i>au</i>		
Skt	<i>e</i> (< <i>ai</i>)			<i>o</i> (< <i>au</i>)		
Av	<i>aē, ōi</i>			<i>ao, ēu</i>		
OP	<i>i ai</i>			<i>au</i>		
Gk	<i>ai, ei, oi</i>			<i>au, eu, ou</i>		
Lat	<i>ī, oe, ae</i>			<i>ū, ū, au</i>		

IE **ai* > OIA. *e*

IE

- * *bhēudhe-tai* > OIA. *bōdhate*, Gk. *peúthetai*, *peúthomai*.
- * *bheretai* > OIA. *bhārate*, Gk. *phéretai*.
- * *bherontai* > OIA. *bhārante*, Gk. *phérontai*.
- * *aidho-* > OIA. *edḥaḥ* (fire-wood, fuel), Gk. *aitḥō* (I burn), Lat. *aedēs* (sanctuary, originally hearth, fire-place), Old Irish. *aed* (fire), OHG. *eit*, OE. *ād* (funeral pile).
- * *tai* (fem. nom. pl) > OIA. *té*, Gk. *tai*, Lat. *is-tae*.
- * *saitus* > OIA. *setus*, (bridge, dam, joining), cf. Lat. *saeta*, (bristle), OHG. *seid* (snare).
- * *daṭyēr* > OIA. *devar* (brother-in-law), Gk. *daēr*, Lat. *lēvir* (< **dēvir*), OChSl. *děverī*.

IE **ei* > OIA. *e*

IE

- * *eiti* > OIA. *ēti*, OP. *aitiy*, Lith. *eit(i)*, *elt*, Gk. *etsi*, Lat. *is*.

IE

- * *neid* > OIA. *néd*; OP. *naiy*, Av. *nōit*, cf. Lat. *ne* in *nescio* 'I do not know'.
- * *eimi* > OIA. *ēmi* (I go), Gk. *eīmi*.
- * *gheimon* > OIA. *hēman* (winter), Gk. *kheima*, *kheimōn*. (to produce, to grant).
- * *deik-* > OIA. *diś-ti*, Gk. *deiknūmi* (show, mark), Lat. *dīcō*, Goth. *ga-teihan* (proclaim).
- * *bheidh-* > OIA. *bhedha-*, Gk. *peithō*, Lat. *fīdō* (trust).

IE **oi* > OIA. *e*

IE

- * *oiyos* (one) > OIA. *e-ka*, Av. *aēvō*, OP. *aivam*, Gk. Homeric *oīos* (alone).
- * *oinos* (one) > cf. OIA. *e-ka*, Gk. *oi'nē* (one on the dice), Lat. *ūnus* < Old Lat. *oinos*, Goth. *ains*.
- * *moi* > OIA. *me*, OP. *mai*y, Gk. *moi*.
- * *uoida* > OIA. *vēda*, OChSl. *vědě*, Gk. *oīda*, Goth. *wāit*, OE. *wāt* (I know),
- * *toi* > OIA. *te*, Lith. *tē*, Gk. *toi*, Goth. *þai*, OE. *þa*.
- * *leloiq^a* > OIA. *rirēca* (I left), Gk. *lēloipa*, Goth. *laihv*, OE. *lāh* (he lent).
- * *ulq^aoisu* > OIA. *vṛkeṣu*, Gk. *lúkoisi*.
- * *bherois* > OIA. *bhares* (you may bear), Gk. *pherois*, Goth. *baírais*.
- * *uoikos* > OIA. *veśa-*, Gk. *oikos* (house, village), Lat. *vīcus*.

IE **au* > OIA. *o*

IE

- * *aug-* > OIA. *ojas* (strength), Lith. *áugu*, Gk. *áuzō* (increase), cf. Gk. *auzáno*, Lat. *augeō*, Goth. *áukan*.
- * *tauro-* > OIA. *tora-ṇa*, Lith. *taūras*, Slav. *turū*, Gk. *taūros* (bull), Lat. *taurus*, Welsh. *tarw*.
- * *aus-* > Gk. *áuō* (draw, liquid, fire), Lat. *hauriō*, ON. *ausa*.

IE **eu* > OIA. *o*

IE

- * *bheudhetai* > OIA. *bodhate*, Gk. *peuthetai*.

IE

- * *leuges* > OIA. *rocas* (light), Av. *raočō*, OP. *rauca* (day), Gk. *leukós* (shine), Lat. *lūx*, Goth. *liuhab* (light).
- * *geustēr-* > OIA. *joštār* (loving), cf. Gk. *geustérion*.
- * *ieug-* > OIA. *yok-tar*, Gk. *zeúgos* (join), Lat. *iūgera* (nom. pl.).
- * *eus-* > OIA. *ósati* (he burns), Gk. *heúō*, Lat. *ūrō*.
- * *eug^uh-* > OIA. *óhate*, Gk. *eúkhomai*, Lat. *voveo* (< **ueg^uh-*).

IE **ou* > OIA. *o*

IE

- * *dhroughos* > OIA. *drōgha-s*, Av. *draoγō*, OP. *drauga* (lie).
- * *g^uou-* > OIA. *go-*, OP. *gau-mātā*, Gk. *bous*.
- * *buboudha* > OIA. *bubodha* (perceived), Gk. **pépoutha* > *pépeutha*, examples are rare in Gk. except in Ablaut forms which alternate with **ev* : **ov* as in *spseudō* : *spoudē*.
- * *oudh^r / *oudh^ṇ* > OIA. *ūdhar / ūdhnas*, Gk. *ōūthar* : *ōūthatos*, Lat. *über* (fruitful), OE. *ūder*, Eng. *udder*.

(ii) The Indo-European long Diphthongs

12. The IE long diphthongs *āi*, *ēi*, *ōi* and *āu*, *ēu*, *ōu* became *āi* and *āu* in OIA as well as in OP, but they remained as such in Greek. The treatment of long diphthongs often differs from the short ones. In Greek before consonants and finally the second elements of diphthong disappeared, e.g., OIA. *aštāu*, *aštā*, Gk. *oktō*, Lat. *octō* from IE **oktōu*. If the second element is preserved in Greek, the first element is often shortened before a consonant in Greek; e.g., OIA. *dyāu^h*, Gk. *zeús* < **zēús* from IE* *diēus*. "When the second element of a long diphthong disappeared or when the first element was simply shortened, the resultant long vowel or short diphthong had the same further development in the different languages as the original simple long vowels or short diphthongs." (Wright p. 31).

IE **āi* > OIA. *āi*

IE

- * *-āi* (dat. sg.) > OIA. *sēnāyāi*, cf. Lith. *raĩkai* (to a hand), cf. Gk. *khōrāi*, *theāi*, Lat. *mensae*, cf. Goth. *gibāi*, (to a gift).

IE **ēi* > OIA. *ai*

IE

* *elēiqsṃ* > OIA. *ārāikṣam*, Gk. *éleipsa* (aor.).* *rēis* > OIA. *rāyas* (gen. sg.), *rās* (acc. pl.), L. *rēs*.* *édēikṣṃ* > OIA. *ádāikṣam* (I showed), Gk. *édeiksa*.IE **ōi* > OIA. *āi*

IE

* *ulq*ōis* > OIA. *vrkāiḥ*, Lith. *vilkaĩs*, Gk. *lúkois*, Lat. *lupis*.* *ulq*ōi* > OIA. *vrkāya*, Lith. *vil̃kui*, Gk. *lukōi*, Lat. *lupō*.IE **āu* > OIA. *āu*

IE

* *nāus* > OIA. *nāus*, Gk. *nāus*, Icelandic *naust*, OIA. *nāuṣu*,
Gk. *nausi*.IE **ēu* > OIA. *āu*

IE

* *diēu-s* > OIA. *dyāus*, Gk. *zeûs* < **zēûs*, Lat. *diēs*, OIA. *dyām*,
Gk. *zēn* (acc.).* *eiēuqṣṃ* > OIA. *áyāukṣam*, Gk. *ézeuksa*.IE **ōu* > OIA. *āu*

IE

* *g*ōu-s* > OIA. *gāuḥ*, Gk. *bōus* < **bōus*, Lat. *bōs*, OIA. *gām*,
Gk. *bōn* (Doric).* *ulq*ōu* (dual end) > OIA. *vrkāu*, *vrkā* (Vedic), Gk. *lúkō*.* *oktōu* > OIA. *aṣṭāu* beside *aṣṭā*, Gk. *oktō* < **oktōu*, Lat. *octō*,
Goth. *ahtáu*.(iii) The IE diphthong with *ai* and *au*.

13. The IE *ai* and *au* combinations developed from the weak grade of IE *ā*, *ē*, *ō* plus *i* or *u* > *ai*, *au* which became *ī* and *ū* respectively. Though the examples are not many, the possibility is not up-rooted. For example,

IE **pai-tos* > OIA. *pītas* from the root *pā*, to drink, which seems to be in the normal grade.

IE **gnau-* > OP. *xšnau* in *ā-xšnautiy*, 'he satisfies'.

B. *The Indo-European Consonants.*1. *The Indo-European Palatal Stops*

14. The IE palatal stops are \hat{k} , $\hat{k}h$, \hat{g} , $\hat{g}h$ which became palatal sibilants in Proto-Indo-Iranian as \acute{s} , $\acute{s}h$, z' , $z'h$. Then they developed in two ways. In the Proto-Indo-Aryan branch they developed first into \acute{s} , ($\acute{s}h$), j , jh and then into \acute{s} , j , h , the voiceless aspirate being absolutely rare or lost in the Indo-Aryan language. On the other hand, in the Proto-Iranian branch they developed into s , dz' , $dz'h$ and then in Avestan and Old Persian they developed in two ways. In Avestan they became s , z , z the voiced aspirate being lost their aspiration in PIr. In Old Persian they had a double representation: in pure OP, they became θ , d , d whereas in words borrowed from Median they became s , z , z . But in the *centum* branches these sounds developed like the pure velars. However, the development in IIr is shown in the following table.

IE	\hat{k}	$\hat{k}h$	\hat{g}	$\hat{g}h$
IIr	\acute{s}	$[\acute{s}h]$	z'	$z'h$

Proto-Indo-Aryan

Proto-Iranian

PIA	\acute{s}	?	j	jh
OIA	\acute{s}	?	j	h

PIr	s	dz'	$dz'h$
Av	s	z	z
OP	θ	d	d
OP Median	$(s)^*$	(z)	(z)

The examples are given below :

IE **ǵ* = OIA. *ś*

IE

- * *ǵm̥tom* > OIA. *śtatam*, Av. *satəm*, OP. *θata-guś*, Lith. *szim̃tas*, (*šim̃tas*), OChSl. *sūto*, Ruśś. *sto*, Gk. *he-katon*, Lat. *centum*, Goth. *hund*, (= *χund*), OHG. *hunt*, MG. *hundert*, OE *hund*, Eng. *hundred*, O. Ir. *cēt*, Welsh *cant*, Tokh. *kandh*.
- * *ek̥uā* > OIA. *aśvā*, Lat. *equa*.
- * *dedor̥ke* > OIA. *dadar̥śa*, Gk. *dedorke*.
- * *kludhi* > OIA. (Vedic) *śrudhi*, Gk. *kluthi*.
- * *klutos* > OIA. *śrutas*, Gk. *klutōs*, Lat. *in-clutus*.
- * *kuōn* > OIA. *śvā* (n), Av. *span*, Lith. *szũ*, Gk. *kuōn*, Lat. *canis*, Goth. *hunds*, Eng. *hound*.
- * *kūros* > OIA. *śūras*, Gk. *a-kuros*.
- * *dek̥m̥* > OIA. *daśa*, Av. *dasa*, ModP *dah*, OChSl. *desę-tũ*, Lith. *dėšimt*, *deszimt*, Arm. *tasn*, Alb. *dhjetë*, Gk. *deka*, Lat. *decem*, Goth. *taihun*, OIrish *deich*, Tokh. *śāk*.
- * *ok̥tōu* > OIA. *aśtāu*, *aśtā*, Lith. *aštuo-ni*, OChSl. *osmi*, Gk. *oktō*, Lat. *octō*, Goth. *ahtau*, Germ. *acht*, OIrish. *ocht*.
- * *kleuos* > OIA. *śravas*, Av. *sravaḥ*, Gk. *klé(u)os*.
- * *deik-* > OIA. *diś-*, Gk. *deiknūmi*, Lat. *dīcō*.
- * *ueik-/uoik/*uik* > OIA. *viś* (dwelling place), Av. *vis-* (noble's residence), OP. *viθ-* (house, royal house), Gk. *oikos* (house), Lat. *vicus* (village), Goth. *weihs*.
- * *kens* > OIA. *śams-*, Av. *saṃh-*, OP. *aθaham* (I said) < *θah*, Lat. *cēnsēo*.
- * *neḥ* > OIA. *naś*, (destruction), *nāśáyati*, OP. *vi-nāθaya* *tiy* (he injures), Lat. *nocet*.
- * *aḥ* > OIA. *aśman* (stone), Av. *asman* (sky, stone), OP. *asmā-nam* (acc. sky) also *aθaṅga* (stone), Av. *asənga*, Med. *asan* (stone), Gk. *ákmōn* (anvil).
- * *śuekuros* < OIA. *śvaśuras*, Lith. *szėsžuras*, Gk. *hekuroś*.

IE **ǵh* > OIA. (c)ch

**ǵh* was one of the rarest sounds in IE language. It was generally preserved in Greek, but in primitive Latin it fell

together with original *ǵh*, and in the prim.Keltic, Germanic and Baltic-Slavonic languages with original *k̂*. It is doubtful what simple *k̂h* would have become in Sanskrit, because it only occurs in the original combination *sk̂h* which became *ch* initially and *ech* medially." (Wright p. 98). For example :

IE

- * *sk̂hinátti* > OIA. *chinátti* (he splits), Gk. *skhízō* (I split), Lat. *scindo*, OE. *scādan* (to divide), OIrish. *scian*.
- * *sk̂hia-* > OIA. *chyáti* (he slits), Gk. *skháō* (I slit).

IE *ǵ > OIA. j

IE

- * *aǵō* > OIA. *ajāmi* (I dive), *ajā*, Gk. *ágō*, Lat. *agō*, Icelandic *aka* (infinitive), OIrish. *agim*.
- * *aǵros* > OIA. *ajraḥ* (field), Gk. *agrós*, Lat. *ager*, Goth. *akrs*.
- * *ǵenos* > OIA. (Vedic), *janah* (race), Gk. *gēnos*, Lat. *genus*, cf. Goth. *kuni* (lineage).
- * *ǵōnu* > OIA. *jānu*, cf. Gk. *gōnu*, Lat. *genu*, Goth. *kniu* (knee).
- * *ǵnōtos* > OIA. *jñātas* (known), Gk. *gnōtos*, *gi-gnō-skō*, Lat. *nōtus*, *gnōscō*, OE. *cnāwan*, Eng. *know*.
- ǵreios* > OIA. *jrāyaḥ* (expanse), Av. *zrayō*, OP. *draya* (sea).
- * *ǵl-* > OIA. *jī-nāti* (he oppresses), Av. *zināiti* (he harms), OP. *adinam* (I took by force).
- * *iǵetai* > OIA. *yajate*, Av. *yazaitē*, OP. *yadataiy* (he worships).
- * *ǵṇto-* > cf. OIA. *rajatām*, Av. *ərəzata*, OP. *ardata* (silver), Lat. *argentum*.
- * *ǵeus-* > OIA. *juṣ-*, Av. *zaoš-* (enjoy), OP. *dauštar* (friend).
- * *ueǵ-* > OIA. *vājra-* (thunderbolt), Av. *vazra* (club), OP. *vazraka* (great).
- * *ǵono-* > OIA. *jana*, Av. *zana*, OP. *zana* (in *vispa-zana*, *paruzana*).

IE *ǵh > Ilr. *žh* > OIA. *h*

IE

- * *eǵhom* > Ilr. *ažham* > Ir. **ažam*, Av. *azəm*, OP. *adām*, OIA. *aham*, MIA. *aham*, AP. *haū*, OB. *haū*, Arm. *ēs* (<*ets), OChSl. *ažu*, Lith. *as*, Old Pruss. *es*, Gk. *egōn*, Lat. *ego*, Goth. *ik*. HG. *ich*, Ger. *ich*, Eng. *I* < OE. *ic*.

IE

- * *ḡhanso-s* > OIA. *haṃsas*, Balto-Sl. *žasis*, cf. Gk. *khen*, Lat. *anser*, OHG. *gans*.
- * *bhāḡhus* > OIA. *bāhu-s*, Av. *bāzu-*, Gk. *pekhus*, OHG. *boug*.
- * *ueḡh*, **uoḡh* > OIA. *vahāmi*, Lith. *vežu*, OChSl. *veza*, Gk. *ōkhos*, Lat. *vehō*, Goth. *ga-wigan*.
- * *dhiḡhā* > cf. OIA. *dehī*, OP. *didā* (wall, fortress), Gk. *teikhos*.
- * *ḡhosto* > OIA. *hasta*, Av. *zasta*, OP. *dasta* 'hand'.
- * *ḡhəl* > OIA. *hiraṇya-*, Av. *zaranya-*, OP. *daraniya-*, cf. Eng. *gold*.
- * *ḡheim-*, **ghiēm* > OIA. *himá*, Gk. *kheima*, Lat. *hiems* 'winter', 'snow'.
- * *ḡhl* > OIA. *-hi*, (enclitic particle) Av. *zī*, OP. *diy*.
- * *ḡhūros* > cf. OIA. *hvaras* (deceit), Av. *zūrō*, OP. *zūra* (wrong).
- * *ḡheṃ/ḡhu-* > OIA. *hutá-* (pour), Gk. *khéō*, Lat. *fundō*.
- * *leigh-* > OIA. *lēhmi* (lick), Gk. *leikhō*, Lat. *lingō*, Goth. *bi-laigon*.

2. The Indo-European Velars and Labio-velars

15. The developments of IE velars and labio-velars are two-fold in OIA.

- (1) They both became velar, i.e., Skt. *k-varga* (when followed by any vowels other than palatals).
- (2) They both became palatals, i.e., Skt. *c-varga* (when followed by palatal vowels, i.e., *ī*, *ē* and *ī*).

In Greek, of course, the IE velars became velars after any vowels, whereas labio-velars had three-fold developments in Gk.,

- (1) It became *k*-velar before and after *u*, its corresponding Skt. would be *k-varga*.
- (2) It became dental, i.e., Gk. *t-varga*, when followed by palatal vowels *ī*, *ē* and *ī*, and its corresponding Skt. would be *c-varga*.
- (3) It became labial, i.e. Gk. *p-varga*, before or after *a* and *o*, and its corresponding Skt. would be *k-varga*.

When IE velars and labio-velars are followed by palatal vowels, such as, \tilde{i} , \tilde{e} and i , they became palatal in Indo-Iranian as well as in OIA. This palatalization method in OIA is conditional. This law of palatalization was announced by Hermann Collitz, and hence is known as Collitz's law of palatalization, or, simply Collitz's law, though this law was discussed by many before Collitz, such as, by Vilhelm Thomsen, by Karl Verner, by Efraïas Tegnér, by Ferdinand de Saussure, and by Johannes Schmidt; but it was elaborated by Collitz and hence it became ultimately popular in the name of Collitz.

It should be borne in mind that the IE palatal consonant series also became palatal in OIA, but this palatalization is not conditional. So to determine the origin of OIA palatal series it should be noted that—

(i) IE palatals became palatal sibilant (i.e. \tilde{s}) and also palatal mutes (i.e., j , $jh > h$) in the voiced without any condition, i.e., whatever vowels may be preceded or followed IE palatal series became palatal in OIA in pre-historic times.

(ii) Whereas the velars and labio-velars became palatal in the pre-historic times under condition, i.e., when they are followed by palatal vowels (\tilde{i} , \tilde{e} , i).

The former (i.e. the IE palatal series becoming palatal in OIA) is called the old or first palatalization, because the series automatically became palatal first both in the historic and pre-historic times. The latter (i.e. the IE velars and labio-velars becoming palatals under conditions), is called the new or the second palatals, because they are conditioned, i.e., when followed by any palatal vowels. It is note-worthy here that second palatalization was not palatalized further after that series became settled in Indian soil, because by that time IE \tilde{e} became \tilde{a} in OIA. So after that no palatalization was allowed or followed after \tilde{a} vowel in OIA even though that vowel has come from IE \tilde{e} . There are some exceptions to this rule. The IE $*g^hem-$ 'to go' which became Av. *ja-sai-ti*, OIA. *ga-ccha-ti*, Lat. *veniō*, should be $*ja-ccha-ti$ in OIA according to this law; but it is *ga-ccha-ti* in OIA. In OP it is also palatalized in optative

ā-jamiyā, 'may it come' corresponding OIA *ga-myāt* without any palatalization. Whether OIA is influenced by the weak grade form **g^hm-tos* > OIA. *gataḥ* is a matter of speculation. However, in general this law is operative in Indo-Iranian. This will be illustrated in the following examples :—

IE velars = OIA. k-varga

16. The IE velars when not followed by any palatal vowels become pure velars (= *k-varga*) in OIA. For example,

IE **q* = OIA. *k*

IE

- * *qaqūd* > OIA. *kakud*, *kakúdmān*, Lat. *cacūmen* (< **cacudmen*).
- * *qālos* > OIA. *kāla-s*, cf. Gk. *kelis* (< **kalis*), Lat. *cāligo*.
- * *qāru-s* > OIA. *kāru-s* (singer), cf. Gk. *kērua*.
- * *sqandō* > OIA. *skandāmi*, Lat. *scandō*.
- * *qarq* > OIA. *karká-s*, *karkaṭaḥ* (crab), Gk. *karkínos*, Lat. *cancer* (< **carcer*, **carcen*).
- * *qoqsā*, **qoqsos* > OIA. *kakṣā*, *kakṣas*, Lat. *coxa*, MHG. *hahse*.
- * *qreṇas* > OIA. *kraviḥ* (raw flesh), Gk. *kreas*, cf. Lat. *cruur*.
- * *qratu-s* > OIA. *kratus*, Av. *xratu*, ModP. *ṣirad*, Gk. *kratos*.
cf. Eng. *auto-cracy*, *demo-cracy*.
- * *kuqros* > OIA. *śukras* (white).
- * *kuqlos* > OIA. *śuklas*.

IE **qh* = OIA. *kh*. = Ir. *χ*.

qh was a very rare sound in IE language. It became *kh* in OIA when not followed by palatal vowels, and *kh* in Greek. In Old Latin it fell together with palatal and velar *ġh* and *gh* and became *h*, *f*, *g*, and in old Keltic and Germanic with IE **k* and **q*, in Lith. and OChSl. with IE *q*. It also became *χ* in Av.

IE

- * *qaqha-* > OIA. *kakhati* (he laughs), Gk. *kakhazō*.
- * *koñqhos* > OIA. *śaṅkhah* (shell), Gk. *kóngkhos*, Lat. *congius* (a small liquid measure).
- * *qharā-* > OIA. *khara* (ass), Av. *ṣara*.
- * *saqhā* > OIA. *sákhā* (friend), Av. *haṣa*.

IE

- * *qhā-* > OIA. *khā-s* (well), Av. *ṣan-*, *ṣāo*.
- * *qhumbhā* > OIA. *kumbhā-* (<**khumbha-*), Av. *ṣumba-* (the loss of the initial aspiration of *k* was due to dissimilation).

IE **g* = OIA. *g*

IE

- * *iugóm* > OIA. *yugam* (yoke, age), Gk. *zugón*, Lat. *jugum*, Goth. *juk*, Eng. *yoke*.
- * *ugrós* > OIA. *ugrah* (mighty), cf. Lat. *augeō*, Goth. *aukan*.
- * *bhaga* > OIA. *bhāga* (dispenser), OP. *baga* (god), Gk. *phagos* (eater).
- * *aug/ueg* > OIA. *ojas*, Lith. *augu*, Gk. *auzō*, Lat. *augeō*, Goth. *aukon*.
- * *gari-s* > OIA. *giris*, Lith. *giria*, OChSl. *gora*.

IE **gh* = OIA. *gh*

IE

- * *d̥ghos*, **d̥lghō-s* > OIA. *dīrghas*, OP. *dargam* (adv.), cf. Gk. *dolikhós*.
- * *stighnutai* > OIA. *stighnute* (ascends), cf. Gk. *steikhō*, Goth. *steiga*.
- * *āgh-* > OIA. *aghā* (an evil, <*ā-han*), Av. *aga*.
- * *gh̥to-s*, **ghertos* > OIA. *gh̥ta* (milk), cf. Old Irish *gert* (milk).
- * *ghausa* > OIA. *ghoṣa* (noise), Av. *gaoš*, OP. *gauša* (ear).
- * *gh̥dhiō* > OIA. *gdhyāmi* (I am eager), Goth. *gredus*, *grēdags*.

IE labio-velars = OIA. *k-varga*

17. The IE labio-velars when not followed by palatal vowels become velars (= *k-varga*) in OIA. For example,

IE **qu* = OIA. *k*

IE

- * *quoteros* > OIA. *kataras*, Gk. *póteros*, *kóteros* (Ionic), Goth. *hwapar*.
- * *quāsetai* > OIA. *kāsate* (coughs), cf. AS. *hwōsta*.
- * *iēquṛt* > OIA. *yākṛt* (<**yākṛt*), Gk. *ēpar*, Lat. *jecur*.

IE

- * *quod* > OIA. *kat* (who), Gk. *po-te* (when), Lat. *quod* (what), Goth. *hwas* (who).
- * *quos-quis* > OIA. *kaś-cid*, OP. *kaś-ci-y*. Lat. *quid*.
- * *ulquo-s* > OIA. *vṛkas*, OP. *varkāna* (Hyrceanian), Eng. *wolf*.
- * *peñqutis* > OIA. *pañktis*, Gk. *pemptos*.
- * *sisequti* > OIA. *siṣakti* cf. *sacate*, Gk. *hepetai*, Lat. *sequitur*.

IE **guh* > OIA. *kh*

IE

- * *squhalō* > OIA. *skhalā-mi* (I stumble), cf. Gk. *sphállō* (<**sq*halō*).

IE **gy* = OIA. *g*

- * *guem*-(come) > OIA. *gamyāt*, OP. *parā-gmatā* (gone forth), Lat. *veniō*.
- * *guōu-s* > OIA. *gāuḥ* Av. *gāus*, OP. *gau-bāruva* (Personal names), *gau-mūtā*. Gk. *boūs*, Lat. *bos*.
- * *guaru-s* > OIA. *guruḥ* cf. Gk. *barus*, Lat. *gravis*, Goth. *kairus*.
- * *e-guāt* > OIA. *āgāt*, Gk. *ēbē*, Doric *ebā*.
- * *gumtos* > OIA. *gataḥ*, Lith. *gy'vas*, Gk. *batos*, Lat. *ventus*.

IE **guh* = OIA. *gh*

IE

- * *guhonos* > OIA. (Vedic) *ghandś* (slayer, compact), Gk. *phónos*, cf. OHG. *gundea*, AS. *gūð*.
- * *guhormo* (heat) > OIA. *ghármā-s*. OP. *garma-pada* (month-name), cf. Gk. *thermos*, cf. Lat. *formus* (hot),
- * *guheguhona* > OIA. *jaghána* (I have slain): *hānmī* (I slay), cf. Gk. *thelno*.

IE velars = OIA. *c-varga*

18. The IE velars when followed by palatal vowels, i.e., *ī*, *ē*, *i* become palatals (= *c-varga*) in OIA. For example,

IE **q* = OIA. *c*

IE

- * *kuqi-s* > OIA. *śucis*, cf. *śukra* (clear, bright).
- * *qieuetai* > OIA. *cyavate* (falls), cf. Gk. *seúto*.

IE

**leuqetai* > OIA. *rocatē* (shines), cf. Gk. *leukós*. Lat. *lucet*, Goth. *liuhaþ*.

**leuqes* > OIA. *rócas* (light), OP. *rauca* (day), Gk. *leukós* (white).

**qieṽ-* > OIA. *acyavat*, OP. *ašiyava* (he set forth), Gk. (Hom) *esseue* (he put into motion).

IE **qh* = OIA. *ch*

The development of velar *qh* into OIA *ch* when followed by palatal vowels (*ĩ*, *ē̃*, *ĩ*) is much disputed. The OIA forms *gacchāmi*, *pr̥cchāmi*, *icchāmi* may come either *sqh* or *skh*. So IE **gum̥-sqhō-* should be **gaskhāmi* in OIA, whereas IE **gum̥-sqheti* > OIA. *ga-ccha-ti*. Av. *jasaiti* cf. Gk. *baskō*. So also, IE **pr̥ksqhō* > OIA **pr̥skhāmi*, whereas, *pr̥ksqheti* > OIA. *pr̥cchati*, Av. *pərəsaiti*, Lat. *poscō*, OHG. *forscōn* and IE **is-sqhō-mi* > OIA. **iṣkhāmi*, whereas IE **issqhēti* > OIA. *i-ccha-ti* Av. *isaiti*, Lith. *jėszkoti*, OChSl. *iskati*, OHG. *eiscon*. This has made the problem uncertain as to the origin of *ch* from velar **qh*.

IE **g* = OIA. *j*

IE

**auges* > OIA. *ojas* (cf. *ugras*), Lat. *augeō*, Goth. *aukan*.

IE **gh* = OIA. *jh* > *h*

IE

**dhrughes* > OIA. *druhas* (harming spirit), cf. *druhyāni*, I harm, Av. *druj-*, OHG. *triogan*.

IE labio-velars = OIA. *c-varga*

19. The IE labio-velars when followed by palatal vowels, i.e., *ĩ*, *ē̃*, *ĩ* become palatals (= *c-varga*) in OIA. For example,

IE **qu* > OIA. *c*

IE

**que* > OIA. *ca*, Gk. *tē*, Lat. *que*.

**qerus* > OIA. *carus* (kettle, pot), Ice. *hverr*.

IE

- * *quetuōres* > OIA. *catvāras*, cf. Gk. *tessares*, Lat. *quatuor* (*quattuor*), Goth. *fidwōr*, Gaulish. *petvan*, Irish *cethir*.
- * *peñque* > OIA. *pañca*, Gk. *pēnte*, Lat. *quinque*, Goth. *fimf*.
- * *quitis* > OIA. *apa-citis* (reward), Gk. *apo-tisis*, *tisis*.
- * *quid* > OIA. *cid*, OP. *ciy*, Gk. *ti* (what), Lat. *quid*.
- * *quos-quid* > OIA. *kaś-cit*, OP. *kaś-ciy*, Lat. *quid* (<Lat. *quod* + Skt. particle *cid*).
- * *sequē* > OIA. *sācā* (with), OP. *hacā* ('from', with), Lat. *sequor* (I follow).

IE **qʰh* = OIA. *ch*

This is a very rare sound in IE. In OIA it fell together with the IE velar *qh* or palatal *kh* with sibilant, e.g., OIA. *skhalate* (he stumbles) is connected with Gk. *sphállomai* (I stumble) where no palatalization occurs in OIA.

IE **gy* = OIA. *j*

IE

- * *gueretai* > OIA. *járate*, (crackles, invokes), OHG. *quirid*. (*quirit*).
- * *guiyos* > OIA. *jīvaḥ*, OP. *jīva*, OChSl. *živŭ*, Lat. *vivos*, Oscan. *bivus*, Goth. *gius*, Eng. *qui-ck*.
- * *gum-ske-ti* > OIA. *gacchati*, Av. *jasaiti* (*s* < *sk*), cf. Gk. *baskō*.
- * *gum-ie-te* > OIA. *gamyate*, Gk. *bainō* (< **banjō*), Lat. *venio* (cf. Eng. *con-venient*).

IE **guh* = OIA. *jh* > *h*

IE

- * *guhēnmi* > OIA. *hānmi*, cf. Gk. *theinō* (*θεῖνω*).
- * *guhēros* > OIA. *hāra* (heat), Gk. *theros* (*θεῖρος*).
- * *guhen-* > OIA. *hanti*, OP. *jantiy*, OIA. *āhan*, OP. *ajan*.
- * *guhndhi* > OIA. *jahi* (*j* by Grassmann's Law), OP. *jadiy*.

3. Indo-European Dental stops

20. The Indo-European dental stops remained dental stops in OIA also as in Greek and other IE languages, except the

voiced aspirates which were lost in almost all the languages other than OIA. For example,

IE *t>OIA. t

IE

* *anti*>OIA. (Vedic) *anti*, Lith. *ānt*, Gk. *antí*, Lat. *ante*, Goth. *and*.

* *bhrātēr*>OIA. *bhrātā*, OP. *brātā*, Gk. *phrātēr*, Lat. *frāter*, Goth. *broþar*.

* *mātēr*>OIA. *mātā*, OP. *mātā*, Lith. *mote*, Doric. *mātēr*, Lat. *mater*, OHG. *muoter*.

* *pātēr*>OIA. *pitā*, Av. *pitā*, OP. *pita*, Gk. *pātēr*, Lat. *pāter*, Goth. *fadar*, Eng. *father*, O. Irish. *athir*.

* *esti*>OIA. *astí*, OP. *astiy*, Gk. *estí*, Lat. *est*, Goth. *ist*.

* *potnī*>OIA. *patnī*, Gk. *pótnia*.

* *tudō*>OIA. *tudāmi*, cf. Vedic. *tundate*, *tundāna*, Lat. *tundō*, Goth. *stautan*.

* *tuam*>OIA. *tvam* (<*tuam), Arm. *du*, Doric. *tú*, Lat. *tu*, Goth. *þu*, Eng. *thou*.

* *treies*>OIA. *trayas*, Gk. *treís*, Lat., *tres*, Goth. *þreis*, Eng. *three*, Gaulish, *trī*, Irish *trí*, *tro*.

IE *th>OIA. th

IE

* *uōittha*>OIA. *vēttha*, Gk. *oistha*, cf. Goth. *waist*.

* *rotho*, **reth-*>OIA. *ratha-* Av. *raθa*, OP. *u-raθa*, Lith. *ritu*, *risti* (roll), Lat. *rota* (wheel), Gaulish. *reto*, Irish. *rethin*.

* *iathā*>OIA. *yathā*, Av. *yaθa*.

IE *d>OIA. d

IE

* *dedorke*>OIA. *dadarša*, Gk. *dedorke*.

* *domos*>OIA. *damas*, Gk. *domos*, Lat. *domus*.

* *dōnom*>OIA. *dānam*, Gk. *dōtor*, Lat. *dōnun*.

* *didōmi*>OIA. *dadāmi* (<*didōmi), Gk. *didōmi*, cf. Lat. *dō*.

* *dekṃ*>OIA. *daša*, Av. *dasa*, ModP. *dah*, Lith. *dėszimt* | *dėšim-t*, OChSl. *dešę-tu*, *dīszimtis*, Arm. *tasn*, Alb. *dhjetë*, Gk. *deka*, Lat. *decem*, Goth. *taihun*, Gaulish. *decanetos*, Old Irish. *deich*, ModIr. *dechmad*, Tok. *sūk*.

IE

- * *duō(u)* > OIA. (Vedic), *dvā dāu*, Gk. *duō*, Lat. *duō*, Goth. *twai*.
- * *mad-* > OIA. *madāmi*, Gk. *madaō*, Lat. *madeō*.
- * *id* > OIA. *idam*, Lat. *id*, Goth. *iða*.
- * *sedo-s* > OIA *sadas* (seat), Gk. *hēdos*, Lat. *sedeō*, Goth. *sitan*.
- * *nisdos* > OIA. *nīḍas* (<PIA. **nizdas*), Lat. *nīdus*, OHG. *nest*, Eng. *nest*.
- * *dereṃō* > OIA. *dāru*, Goth. *triu*, Gaulish *dervo*, Irish. *deruce*.
- * *suādu* > OIA. *svādu* (sweet), Lat. *suāvis*, Gaulish. *svādu*, Irish. *sadh*.
- * *deddhi* > IIr. **dazdhi* > PIA. **dazdhi* > OIA. *dehi* (<OIA. **dedhi*), Plr. **daizdhi* > *daiddhi*, Av. *dazdi*.

IE **dh* > OIA. *dh*

IE

- * *dhūmōs* > OIA. *dhūmas*, Gk. *thūmos*, Lat. *fūmus*.
- * *dhīghā* > OIA. *dīghā*, OP. *didā* (wall), Gk. *teikhos*.
- * *√dhē* > OIA. *dhā* > *dadhāmi*, Gk. *thē* > *tithēmi*.
- * *dhīdhēmi* > OIA. *dādhāmi* (<**dhīdhēmi*), Gk. *tithēmi*.
- * *dhi* (2nd p. imp.) > OIA. (Vedic) *dhi* > Cl. *hi*, Av. *ḍi*, Gk. *thi*.
- * *dheto* > OIA. *dhita*, cf. *sudhita*, *durdhita* Av. *dāta*, OP. *dāta*, cf. Gk. *thetos*, Lat. *con-ditus*, *ab-ditus*, *crē-ditus*.
- * *e-dhēt* > OIA. *adhāt*, OP. *adā*, Gk. *ethēke*, Lat. *fē-cit*.
- * *idhi* > OIA. *ihi* (<**idhi*), Gk. *ithi*.
- * *kludhi* > OIA. (Vedic) *śrudhi*, Gk. *kluthi*.
- * *medhu* > OIA. *madhu*, Gk. *methu*, Lat. *medius*, Goth. *midjis*.

IE **n* > OIA. *n*

IE

- * *nebhos* > OIA. *nabhas*, Gk. *nephos*, Lat. *nebula*, OHG. *nubul*.
- * *neptos* > OIA. *napāt* (<*napats* < *naptṛ*, fem. *naptī*), Av. *napāt*, *naptan*, fem. *naptī*, OP. *napāt*, Lat. *nepos* (<**nepots*).
- * *nisdos* > OIA. *nīḍas*, Lat. *nīdus*, OHG. *nest*, Eng. *nest*.
- * *ne* > OIA. *nā*, Av. *na*, OP. *na*, Lat. *ne*, Goth. *ni*.
- * *nē* > OIA. (Vedic), *nā* Lat. *nē*, Goth. *nē*.
- * (*a*)*nero-s* > OIA. *naras* (pl. of *nṛ*), Av. *nərə*, Gk. *anēr*, Old. Lat. *nero*, Lat. *nēria*, *nero*.
- * *anti* > OIA. *anti*, Lith. *ānt*, Gk. *anti*, Lat. *ante*, Goth. *and*.
- * *dōnum* > OIA. *dānam*, Gk. *dōtor*, Lat. *dōnum*.

4. The Indo-European Labial stops

21. The Indo-European labial stops remained labial stops in OIA as well as in Greek and other IE languages, except Latin where the voiceless stops became spirant. The voiced aspirates are also lost in almost all the languages. For example,

IE **p* > OIA. *p*

IE

- * *apo* > OIA. *āpa* (away, off, forth), OP. *apa*, Gk. *apó*, Lat. *ab*, Goth. *af*, OHG. *aba*, Eng. *of*.
- * *peñque* > OIA. *pañca*, Lith. *penki*, Arm. *hing*, Gk. *pēnte*, Lesb. *pēmte*, Lat. *quinque*, Goth. *fims*, OHG. *finf*, Old Irish *coic*, Old Welsh. *pimp*, Breton, *pemp*.
- * *peq* > OIA. *pácā-mi*, Gk. *péssō*, Lat. *coquō*.
- * *peri* > OIA. *pāri* (around), Av. *pairi*, OP. *pariy*, Gk. *pēri*, Lat. *per*, Goth. *fair*, Old Irish. *air*, Gaellic. *are*.
- * *opos* > OIA. (Vedic) *āpas* (work), Lat. *opus*.
- * *pet* > OIA. *pātāmi* (fall, fly), Gk. *pēto-mai*, *pīptō*, Lat. *petō*, *penna*, Gaulish. *etnosō*, O. Irish. *en*.
- * *plē* > OIA. (Vedic) *prātá*, *prāṇa* (full), Gk. *plērēs*, Lat. *plēnus*, *plētus*.
- * *proti* > OIA. *prāti*, Gk. *proti* (*prós*).
- * *pātēr* > OIA. *pitā*, Av. *pitā*, OP. *pitā*, Gk. *patēr*, Lat. *patēr*, Goth. *fadar*, OE. *faeder*, Eng. *father*, Old Irish, *athira*.
- * *pāros* > OIA. *purás*, Av. *purō*, Gk. *páros*, Goth. *faúra*, OE. *fore*.
- * *pró* > OIA. *pra*, OP. *fra*, Gk. *pró*, Lat. *prō*, *prōd*, Goth. *fra*.
- * *upo* > OIA. *upa*, Gk. *hupó*, Lat. *sub*, Goth. *uf*, Gaulish. *vo*, Irish. *fo*.
- * *nepōts* > OIA. *napāt*, OP. *napā*, Lat. *nepos*.
- * *uper* > OIA. *upar-i*, Av. *upairi*, OP. *upariy*, Gk. *hupér*, Lat. *super*, Goth. *ufar*, OHG. *ubir*, Old Eng. *ofer*, Eng. *over*, Gaulish. *ver*, Irish. *for*.
- * *septn/m* > OIA. *sapta*, Lith. *septyni*, Gk. *heptá*, Lat. *septem*, Goth. *sibun*.

IE **ph* > OIA. *ph*

IE

- * *sphṛṅis* > OIA. *sphūrjati* (he cracks), Lith. *spirgáu* (I fry), Alb. *frûth* (<*frûdh*), Gk. *spharagēomai* (I crack), OHG. *spru-
oan*, Eng. *spark*.
- * *sphīe*- OIA. *sphyāh* (wedge), Gk. *sphēn*.
- * *sphela*- OIA. *phālakam* (footstool), Gk. *sphélas*.
- * *qapha*- > OIA. *kapha*, Av. *kaofa*, OP. *kaufa* (mountain).
- * *kapha*- > OIA. *ṣaphā* (hoof), Av. *safa*, OHG. *huof*,
- * *pheino*- > OIA. *phēnā*, OChSl. *pěn*, OHG. *feim*,
- * *phelgu*- > OIA. *phalgu-s* (weak, worthless), Gk. *phelgúnei*.
- * *phel* > OIA. *phalam*, Lat. *polleus* (able), *pollea* (thumb),
Gaulish. *ollo-gnātus* (great), Irish. *oll*.

IE **b* > OIA. *b*

IE

- * *bolom* > OIA. *bālam* (power), OChSl. *bolij*, Lat. *dē-bilis*
(powerless).
- * *bālos* > OIA. *bālās*, Russ. *bal*, cf. *balovāti* (to dally).
- * *balbal*/**barbar* > OIA. *balbalā-karomi* (I stammer), OIA.
barbaras, Gk. *bárbaros*, cf. Lat. *balbus*,
- * *bal*- > OIA. *balbalīti* (ŚB), Gk. *ballízō* (I dance).
- * *pibō* > OIA. *pibāmi*, Lat. *bibō*, Irish. *ebaim*.
- * *bd* > OIA (Vedic) *upabda*, Gk. *epībdai*.
- * *buq* > OIA. *buk-kāras* (roar), OChSl. *bučati*, Gk. *búk-tes*,
buk-anē, Lat. *būcina*.

IE **bh* > OIA. *bh*

IE

- * *bhrātēr* > OIA. *bhrātā*, OP. *brātā*, Gk. *phrātēr*, Lat. *frātēr*,
Goth. *broþar*.
- * *bhāghus* > OIA. *bāhus*, Gk. *pekhus*, Doric *pākhus*, OHG. *boug*.
- * *ebherom* > OIA. *abharam*, OP. *abaram*, Gk. *épheron*.
- * *bherō* > OIA. *bharā-masī*, Av. *barāmahi*, Gk. *pherō*, Lat. *ferō*,
Goth. *bair*.
- * *nebhos* > OIA. *nabhas*, Gk. *nephos*, Lat. *nebula*, OHG. *nebul*.
- * *bheṃō* > OIA. *bhavāmi*, Av. *bū*, Gk. *phuō*, Lat. *fui-t*, OHG.
būam, Eng. *be*.

IE **m* > OIA. *m*

IE

- * *mātēr* > OIA. *mātā*, OP. *mātā*, Gk. *mātēr*, Lat. *māter*, OHG. *muoter*.
- * *dhūmos* > OIA. *dhūmas*, Gk. *thumos*, Lat. *fūmos*.
- * *medhu* > OIA. *madhu*, Gk. *methu*, Lat. *medius*, Goth. *medjis*.

5. The Indo-European semi-vowels

22. The IE semi-vowels *i* and *u* remained semi-vowels in OIA, whereas they are lost in Greek, Latin and other languages. For example,

IE **i* > OIA. *y*

IE

- * *iathā* > OIA. *yathā*, Av. *yaθa*.
- * *ios* > OIA. *yá-s*, Gk. *hōs*.
- * *iequrt* > OIA. *yakrt*, Av. *yākar*, Gk. *hēpar*, Lat. *jecur*.
- * *medhios* > OIA. *madhyas*, Gk. *messos*, *mesos*, Lat. *medius*, Goth. *midjis*.
- * *treies* > OIA. *trayas*, Gk. *treis*, Lat. *trēs*, Goth. *þreis*.
- * *iudh* > OIA. *yudh-*, Gk. *usmīnē*.
- * *g^hiā* > OIA. *jya*, Lith. *gija*, Gk. *biós* 'bow'.

IE **u* > OIA. *v*

IE

- * *uōittha* > OIA. *véttha*, Gk. *oî'stha*, cf. Goth. *waist*.
- * *duō-* > OIA. (Vedic) *dvā*, *dvāu*, Gk. *duō*, Lat. *duo*, Goth. *twai*.
- * *suādu* > OIA. *svādu*, Lat. *suāvis*, Germ. *svādu*, Irish. *sadh-*.
- * *dereuo* > OIA. *dāru*, Goth. *triu*, Ger. *dervo*, Irish. *deruce*.
- * *uēquos/ueques* > OIA. *vacas*, Gk. *ēpos*.
- * *uōqu-s/uoquos* > OIA. *vāk*, Gk. *op-os*, Lat. *vōx*.
- * *uoida* > OIA. *veda*, Gk. *oida*, Goth. *wait*.
- * *uoikos* > OIA. *veśas* (cf. Skt. *viś-* in *viśāmpati* 'lord of the people'), Gk. *oikos*, cf. Lat. *vīcus*, Goth. *weihs*.
- * *uļquos* > OIA. *vṛkas*, Lith. *vilkas*, Gk. *lukòs*, Lat. *lupus*, Goth. *wulfs*.
- * *ueksī* > OIA. *vakṣi* (you are willing), cf. *vaśmi* < *uekmi*, Gk. *hekōn*.

- * *suekuros* > OIA. *śvaśura-s*, Gk. *hekuros*, cf. Lat. *socer*, Goth. *swaihra*.
- * *suekrū-s* > OIA. *śvaśrūs*, OChSl. *svekry* < masc. *svekrū*, Lat. *socrus*, Gk. *hekura*, Goth. *swalhrō*.

6. The Indo-European Liquids

23. The IE *r* and *l* generally remained *r* and *l* in OIA, as also in Greek and other European languages. In OIA it varies widely, and is interchangeable between *r* and *l*, and this is due to a mixture of dialects, as in OIA, *car* and *cal*, *roca* and *loka*, *rehmi* and *lehmi* (I lick). These two sounds were originally dental as is also corroborated by the evidence of some Prātiśākhya. Some examples are given below :

IE **r* > OIA. *r*

IE

- * *rē-s* > OIA. *rā-s*, (wealth), Lat. *rēs*.
- * *reud* > OIA. *rodimi*, Lat. *rūdō*, AS. *rēotan*.
- * *bherō* > OIA. *bharāmi*, Gk. *pherō*, Lat. *ferō*, Goth. *baíra*.
- * *peri* > OIA. *pari*, Gk. *peri*, Lat. *per*, Goth. *fair-*.
- * *dedorke* > OIA. *dadarśa*, Gk. *dedorke*.
- * *mātēr* > OIA. *mātā(r)*, Gk. *mētēr*.

IE */ > OIA. *l*, *r*

IE

- * *leighmi* > OIA. *lehmi*, Gk. *leikhō*, Lat. *lingō*, Goth. *laigōn*.
- * *lubh/*leubh* > OIA. *lubhyāmi*, (I desire), Lat. *lubet*, Goth. *liufs*.
- * *lambetai* > OIA. *lambate*, cf. Lat. *lābor*.
- * *limpō* > OIA. *limpāmi*, Gk. *lipos*, Lat. *līppus*, Goth. *bi-leiban*, *laiba*, *liban*.

7. The Indo-European sibilant

24. The Indo-European sibilant *s* remained *s* in OIA and also in the oldest Greek, but at a later time this *s* was lost in Greek and made the following vowel aspirated (or *spiritus asper*) ; e.g., OIA *sānaḥ* (old), Lith. *senas* (old), Gk. *henē*, Lat. *sen-ex*, Goth. *sin-eigs*. Similarly, OIA. *saptá*, Lith. *septyni*,

Gk. *heptá*, Lat. *septem*, Goth. *sibun*, O. Ir. *secht*, etc. This is illustrated below.

IE *s* > OIA. *s*

IE

- * *septṇ/m* > OIA. *saptá*, Lith. *septyni*, Gk. *heptá*, Lat. *septem*, Goth. *sibun*, O. Iri. *secht*.
- * *sénos* > OIA. *sanah* (old), Lith. *sėnas* (old), Gk. *henē* (fem.), cf. Lat. *senex*, Goth. *sineigs*.
- * *srēṇō* > OIA. *srāvāmi* (I flow, I stream), Gk. *rheō*.
- * *suādu-s* > OIA. *svādú-s*, Gk. *hēdús*, Lat. *suāvis*.
- * *sólno-s* > OIA. *sárva-s*, Gk. *hōlos*.
- * *smei-* > OIA. *smayate*, Gk. *philommeidēs*, Lat. *mirus*, Eng. *smile*.
- * *suēpno-s* > OIA. *svápna-s*, Gk. *húpnos*, Lat. *somnus*, Icel. *svefn*.
- * *sérpō* > OIA. *sárpāmi*, Gk. *hérpō*, Lat. *serpo*.
- * *sédos* > OIA. *sádas* (seat) Gk. *hēdos*, Lat. *sedeō*, Goth. *sitan*.
- * *suekuro-s* > OIA. *śvaśuras*, Qchsl. *svekrū*, Lith. *szeszuras*, Gk. *hekurós*, cf. Lat. *socer*, Goth. *swalthra*.
- * *segh-tos* > OIA. *sāḍha-s* (overpowered), Gk. *ékhō*.
- * *dōsi-* > OIA. *dāsyāmi*, Gk. *dōsō*.

CHAPTER TWO

The Sources of Old Indo-Aryan Sounds

As far as our evidence shows OIA or Sanskrit, both Vedic and Classical, has the following accepted sounds or phonemes :

§1. The OIA sound system

Varna-samāmnāyā

			Velar <i>kanthya</i>	Palatal <i>tālavya</i>	Cerebral <i>mūrdhanya</i>	Dental <i>dantya</i>	Labial <i>oṣṭhya</i>
Vowels – 14							
Short			<i>a</i>	<i>i</i>	<i>ɾ</i>	<i>ɽ</i>	<i>u</i>
Long			<i>ā</i>	<i>ī</i>	<i>ṛ</i>	<i>ḷ</i>	<i>ū</i>
Diphthongs				<i>e, āi</i>			<i>o, āu</i>
Consonants – 38							
Stops	Voiceless	unaspirated	<i>k</i>	<i>c</i>	<i>ṭ</i>	<i>t</i>	<i>p</i>
		aspirated	<i>kh</i>	<i>ch</i>	<i>ṭh</i>	<i>th</i>	<i>ph</i>
	Voiced	unaspirated	<i>g</i>	<i>j</i>	<i>ḍ (l)</i>	<i>d</i>	<i>b</i>
		aspirated	<i>gh</i>	<i>jh</i>	<i>ḍh (lh)</i>	<i>dh</i>	<i>bh</i>
		nasals	<i>ṅ</i>	<i>ñ</i>	<i>ṇ</i>	<i>n</i>	<i>m</i>
	Semi-vowels			<i>y</i>	<i>r</i>	<i>l</i>	<i>v</i>
Sibilants		Voiceless		<i>ś</i>	<i>ṣ</i>	<i>s</i>	
Aspiration		Voiced	<i>h</i>				
Spirants/ Fricatives		Voiceless	<i>ḥ</i>				
			<i>ḥ</i> : (= <i>h</i>) <i>visarja-</i> <i>nīya</i> <i>ḥ</i> : <i>k(h)-ṣ</i> <i>jihvā-</i> <i>mūliya</i>				<i>p(h)-ḥ</i> <i>upadh-</i> <i>māntya</i>

§2. *The Sources of OIA Sounds.*

The sources of the above OIA sounds can be traced mainly from Indo-European and Indo-Iranian. They can also be traced from OIA, sometimes from Prakrit or Dravidian influences. Some possible permutations and combinations for the sources of various OIA sounds are indicated below :

I. Vowels

[1] OIA. *a*

1. The sources of OIA *a*-sound can be traced from IE **a*, **e*, **o*, **ṛ*, **m* ; e.g.,
 IE **a* > OIA. *a* ; IE **apo* > OIA. *apa*, Gk. *āpo*.
 IE **e* > OIA. *a* ; IE **esti* > OIA. *asti*, Gk. *esti*.
 IE **o* > OIA. *a* ; IE **aḡros* > OIA. *ajra-s*, Gk. *agros*.
 IE **ṛ* > OIA. *a* ; IE. *sepṛ* > OIA. *sapta*, Gkt. *hepta*.
 IE **m* > OIA. *a* ; IE **kṛtom* > OIA. *śatam*, Gk. *he-katon*.
2. As the IE **a*, **e*, **o* became *a* in IIr. which again became *ā* in OIA, the origin of *a* from IIr. source will be the same with OIA ; e.g.,
 IE **ebherom* > IIr. **abharam* > OIA. *abharam*, Gk. *epheron*.
3. The development of OIA *a* from IE through IIr. is preserved in OIA throughout, but even in OIA we have *sat-ā* beside the stem *sant-* 'being', though the IE sonant nasals are presumed for this origin.
4. *a* very rarely represents OIA *ṛ* through the influence of Prakrit ; e.g.,

OIA. *vikṛta* > Vedic *vikṛta*.

OIA. *nṛtya* > Vedic *naṭa*.

[2] OIA. *ā*

1. The sources of OIA. *ā* can be traced from IE **ā*, **ē*, **ō*, **ṛ*, **m* ; e.g.,
 IE **ā* > OIA. *ā* ; IE **mātēr* > OIA. *mātā*, Gk. *mātēr* (Doric).
 IE **ē* > OIA. *ā* ; IE **e-dhēt* > OIA. *adhāt*, Gk. *ethē-ken*.
 IE **ō* > OIA. *ā* ; IE **neptōs* > OIA. *naptā*, Gk. *neptos*.
 IE **ṛ* > OIA. *ā* ; IE **e-ḡṛ-nāt* > OIA. *ajānāt*, Lat. *noscet*.
 IE **m* > OIA. *ā* ; **gṛ-m-tu* > OIA. *gātu* (Vedic), OP. *gaturv*.

2. *ā* often comes by contraction (*sandhi*) of the homogeneous sounds ; e.g., *āsam* < **a-as-am*.

3. *ā* can frequently be derived from a syllable containing a nasal ; e.g.,

√*khan* + *ta* > *khāta* ; √*jan* + *ta* > *jāta* ; √*han* + *ta* > *ghāta* ;
√*san* + *ta* > *sāta* (gained) ; √*van* + *ta* > *vāta* (won).

4. In very rare instances the nasal is retained ; e.g.,

√*śram* + *ta* > *śrānta*, √*kram* + *ta* > *krānta* ;
√*dhvan* + *ta* > *dhvānta*, √*śam* + *ta* > *śānta*.

“Here the reappearance of the nasal in a weak radical syllable is an innovation in OIA due to the influence of other forms with nasals (VG §7a). Cf. also the lengthened grade of Ablaut.

[3] OIA. *i*

1. The sources of OIA *i* can be traced from IE **i*, **ə* ; e.g.,

IE **i* > OIA. *i* ; IE **peri* > OIA. *pari*, Gk. *peri*.
IE **ə* > OIA. *i* ; IE **pātēr* > OIA. *pitā*, Gk. *patēr*.

2. The *i* often represents the weak-grade of *e* and *aya* both in roots and suffixes ; e.g.,

√*vid* > *veda* : *vidma* ; *navyas* > *naviṣṭha* (newest).

3. *i* also comes as the weak-grade of the roots ending in *ā* whose weak-grade vowel will be **ə* in IE ; e.g.,

√*sthā* + *ta* > *sthita*, but *sthāsyati*, √*śas* + *ta* > *śiṣṭa*, but
śāsti (teaches), *sādhati* : *sidhyati* (succeeds).

4. *i* is sometimes found as a connecting vowel between the root and the suffix (and in all these cases, the IE suffix *ə* is considered as the connecting vowel) ; e.g.,

√*jan* + *tr* > *jan-i-tr* (begetter).

√*vand* -> *vavandire* (3p. pl. mid).

5. Sometimes *i* comes from a Prakrit representative of OIA. *r* ; e.g., √*śrath* (< *śrth*) : *śithira* (loose).

[4] OIA. *ī*

1. In general OIA *ī* corresponds to IE **ī* ; e.g.,

IE **ī* > OIA *ī* ; IE **uiros* > OIA. *vīras*.

2. *ī* often represents the weak-grade of *yā* both in roots and suffixes (in these cases the IE **əi* is often considered as the source of OIA *ī*) ; e.g.,

√*yā* : *jīta* (overcome),

√*aś* : *asyām* (I would attain) : *asīmahi* (we would attain).

3. It also represents the weak-grade of both radical and suffixal *ā*, though this can probably be explained as either a weak-grade of *ai* or later substitution for *i* ; e.g.,

√*gai* : *gātha* (song) : *gītha* (AV),

√*dā* : *diṣva* (VS) : *adīmahi* (VS),

√*hā* : *hīna* (forsaken).

4. Sometimes *ī* can be obtained as a sort of compensatory lengthening ; e.g.,

IE **nisdos* > IIr. **nizdos* > OIA. *nīḍaḥ*.

IE **lisdhos* > IIr. **lizdhas* > OIA. *līḍhaḥ*.

5. *ī(r)* along with *r* can be traced from long *ī* ; e.g.,

kī : *kīrti* (fame) ;

dī : *dīrgha* (long) : *drāghīyas* (longer) ;

tī : *ut-tīrṇa*.

6. *ī* often comes by contraction (*sandhi*) of the homogeneous sounds ; e.g.,

muni + *indra* > *munindra* ; *ati* + *iva* > *atīva* ; *prati* + *iti* >

pratīti ; *giri* + *indra* > *girindra*.

[5] OIA. *u*

1. OIA *u* corresponds to IE **u* ; e.g.,

IE **medhu* > OIA. *madhu*, Gk. *methus*.

2. OIA. *u* also represents the weak-grade of *o* or *va* both in roots and suffixes ; e.g.,

√*yuj* > *yuga* (yoke) : *yoga* (yoking).

√*svap* > *svapna* : *supta*.

√*kṛ* > *kṛnu* : *kṛnoti* (makes) : *kurvanti*.

[6] OIA. *ū*

1. OIA long *ū* corresponds to IE **ū* ; e.g.,

IE **dhūmos* > OIA. *dhūmas*, Gk. *thūmos*, Lat. *fūmus*.

2. *ū* also comes from the weak-grade of *āu*, *vā* and *avi*; e.g.,

abhūt : *bhaviṣyati*.

dhūta : *dhāutari* (shaking).

sūd (sweeten) : *svād* (enjoy).

3. *ū(r)* along with *r* can be traced from long *ṛ* after labial; e.g., *pṛ* > *pūrṇa* (full).

4. *ū* often comes from *u* as a sort of compensatory lengthening; e.g., *√vāh + ta* > **uḍḍha* > *ūḍha*.

5. *ū* often comes by contraction (*sandhi*) of the homogeneous sounds; e.g.,

vidhu + udaya > *vidhūdaya*; *madhu + utsava* > *madhūtsava*;

sādhū + uktam > *sādhūktam*.

[7] OIA. *ṛ*

1. The origin of OIA *ṛ* can be traced from IE **ṛ* and **ṛ̥*; e.g.,

IE **mṛtos* > OIA. *mṛtas*, Gk. *ambrotos*.

IE **ulqʷos* > OIA. *vṛkas*, Gk. *lukos*, Lat. *lupus*.

[8] OIA. *ṛ*

The long *ṛ* in OIA is a problem. The general tendency is to trace the OIA. *ṛ* from its corresponding IE long *ṛ*. But the IE long *ṛ* would give rise to *īr* or *ūr* in OIA, and not long *ṛ*. In OIA the long *ṛ* is found in the accusative and genitive plural of masculine and feminine nouns of *ṛ*-stems; e.g., *pitṛṇ*, *mātṛṣ* for acc. pl. and *pitṛṇām*, *mātṛṇām* for gen. pl.

“The *ṛ* was written only where *a-i-u*-stems showed analogous forms with *ā ī ū*; and prosodical evidence proves that, in the RV., *ṛ* is required even in the two genitives in which *ṛ* is written (*ṇṛṇām* and *tiṣṇṛṇām*)” (VG §13).

In the Taittiriya Saṃhitā, the genitive plural of *ṛ*-stem does not have always long *ṛ*, rather short *r* is found; e.g., *pitṛṇām*, *ṇṛṇām*, *tiṣṇṛṇām*.

There are some roots with *ṛ*, such as, *kṛ*, *tṛ*, *pṛ* etc., but their developments do not show any *ṛ* in any of their derivative words, such as, *kīrṇa* as in *vikīrṇa*, *prakīrṇa*, *uttīrṇa*, *pūrṇa*, *pūrta* (reward) where it develops as *īr* or *ūr*. However, some

scholars suggest that long *ṛ* is an analogous formation as is found in *a*, *i* and *u* stems of masculine nouns, such as, *narān*, *munin*, *sādhūn*.

Long *ṛ* is often found in OIA. sandhi ; e.g.,

pitṛ + ṛṇam > pitṛṇam ; *bhrātṛ + ṛddhi > bhrātṛddhi*.

[9] OIA. *ḷ*

The origin of OIA *ḷ* cannot be traced from IE **l̥*, because IE **l̥* becomes *r* in OIA. There is hardly any word with *ḷ* except *√kḷp*, and the words formed with this root have either *al* or *ḷ* only ; e.g., we have *kḷpti* (arrangement) in the Vājaseneyi Saṃhitā, and *cākḷpré* (3 p.pl.perfect) and *cikḷpāti* (3 sg. aor subj) in the R̥gveda.

Some scholars think that *ḷ* is added to the Devanāgrī alphabet only for the sake of symmetry ; otherwise there is hardly any root except *kḷp* with this sound, and this is again a variation of *kṛp* : *kḷptás* vs *kṛptás*.

In Pāṇini's *Dhātupāṭha*, there are some roots where the indicatory letter *ḷ* is used ; e.g., *gamḷ* for *gam*.

[10] OIA. *ḷ̥*

The long *ḷ̥* in OIA is totally absent, and there is no single genuine word which actually occurs in Sanskrit literature with this sound. But the grammarians suggest that long *ḷ̥* could be possible in the case of sandhi where *r* and *ḷ̥* will make it long *ḷ̥* ; e.g., *hotṛ + ḷ̥kāra > hotṛkāra* or *hotḷ̥kāra*.

Vopadeva (13th cent. A.D), however, has given a word *śakḷdanta*, where long *ḷ̥* occurs ; otherwise long *ḷ̥* is totally absent.

Some scholars suggest that long *ḷ̥* is added to the alphabet only to maintain the symmetry of Sanskrit sounds.

[11] OIA. *e*

1. The origin of OIA *e* can be traced from IE **ai*, **ei*, and **oi* ; e.g.,

IE **bheudhetai > OIA. bodhate*, Gk. *peuthomai*.

IE **eiti > OIA. eti*, Gk. *eiti*.

IE **uoida > OIA. veda*, Gk. *oida*, Goth. *wit*.

2. In some cases the origin of OIA *e* can be traced from Ilr. **az* ; e.g.,

IE **esdhi* > Ilr. **azdhi* > OIA. *edhi* (Vedic), Av. *zdi*.

3. *e* comes from the Sandhi, i.e., *a + i* making the vowel *e*, a gunated one ; e.g., *nara + indra* > *narendra*.

4. *e* often comes from pre-historic contractions within words in declension and conjugation ; e.g.,

aśva + i (loc. sg.) > *aśve*.

[12] OIA. *ai*

1. The OIA *āi* has come from IE **ai*, **ēi*, and **ōi* ; e.g.,

IE **-āi* (4th case-end.) > OIA. *senāyāi*, cf. Gk. *theāi*.

IE **elēiqsam* > OIA. *arāikṣam*, Gk. *eleiksam*.

IE **ulqōi* > OIA. *vrkāya*, Gk. *lukoi*.

2. As usual in Sandhi with a gunated vowel *e*, i.e., *a + e*, the result is *āi*, e.g., *ava + ehi* > *a āhi* ; *eka + eka* > *ekāika* ; *sadā + eva* > *sadāiva*.

3. *āi* often comes from the lengthened grade of *i* ; e.g.,
√*i* > *eti* : *ita* : *ait*.

[13] OIA. *o*

1. OIA *o* represents IE **au*, **eu*, and **ou* ; e.g.,

IE **auges* > OIA. *ojas*, Gk. *auges*.

IE **bheudhetai* > OIA. *bodhate*, Gk. *peuthetai*.

IE **g^hou-* > OIA. *go-in go-mātarah*.

2. Sometimes IE **gh + t* became OIA. *q̣h* with the modification of a preceding vowel which ultimately becomes *o* ; e.g.,

IE **segh + tum* > OIA. *sōq̣hum*.

IE **uegh + tum* > OIA. *vōq̣hum*.

3. *o* comes from the Sandhi, i.e., *a + u* making the vowel *o*, a gunated one, e.g., *sūrya + udaya* > *sūryodaya*.

[14] OIA. *āu*

1. OIA *āu* has come from IE **āu*, **ēu*, and **ōu* ; e.g.,

IE **nāus* > OIA. *nāus* (boat), Gk. *naus*.

IE **diēus* > OIA. *dyāus*, Gk. *zeus* (< **zēus*)

IE **g^hōus* > OIA. *gāus* Gk. *bous*.

2. *āu* also comes from Sandhi in combination with *a/ā + o*, a gunated vowel ; e.g., *jala + ogha > jalāughā* ; *mahā + oṣadhi > mahāuṣadhi*.

3. *āu* is the lengthened grade of the gunated vowel *o* ; e.g., *dvār-i : dūvāraka : dāuvārika*.

II. Consonants

K-varga

The origin of OIA *k*-series is from IE velar and labio-velar when not followed by any palatal vowels.

[15] OIA. *k*

1. OIA *k* comes from IE **q, *qʷ* ; e.g.,

IE **qaqud > OIA. kakud*, Lat. *cacūmen*.

IE **uḷqʷos > OIA. vṛkas*, Gk. *lukos*, Lat. *lupus*.

2. In a few instances *k* stands for a medial *t* in Vedic ;
e.g., *vṛkkau* for *vṛtkau*,
prkṣu for *prtsu*.

This may be regarded as the influence of Prakrit where the assimilation plays a prominent part.

3. In a few instances *k* interchanges with a labial medially ; e.g.,

kakardu beside *kapardu*.

4. *k* often comes from palatal *ś* in declension ; e.g.,
diś : dik (nom. sg.).

[16] OIA. *kh*

1. OIA *kh* has come from IE **qh, *qʷh* ; e.g.,

IE **koñghos > OIA. śaṅkhah* (shell), Gk. *konkhos*, cf. Lat. *congius*.

IE **sqʷhalō > OIA. skhālāmi*, cf. Gk. *sphállō*.

[17] OIA. *g*

1. OIA *g* has come from IE **g, *gʷ* ; e.g.,

IE **ugrós > OIA. ugrah*, Lat. *augeo*, Goth. *aukan*.

IE **gʷntos > OIA. gatah*, Lith. *gy'vas*, Gk. *batos*, Lat. *ventus*.

2. OIA. *g* might come from IE **gh* and *g^h* when two aspirates follow ; e.g.,

IE **ghr̥dhi*āmi > OIA. *gr̥dhyāmi*, Goth. *grēdus*.

IE **g^hheg^hhona* > OIA. *jaghana*, cf. Gk. *theinō*.

[18] OIA. *gh*

1. OIA. *gh* has come from IE **gh* and *g^h* ; e.g.

IE **ghrtos* > OIA. *ghrtas*; O. Irish. *gert* (milk).

IE **d̥lghos* > OIA. *dīrghas*, Gk. *dolikhōs*.

IE **g^hhonos* > OIA. *ghanas* (slayer), Gk. *phonōs*, OHG. *gundea*, AS. *guð*.

IE **g^hhormos* > OIA. *gharmaḥ*, OP. *garma-pada*, Gk. *thermos*, Lat. *formus*.

2. In some cases OIA *gh* comes from OIA *h* though this could also be traced from IE **gh*, but apparently they are from OIA. *h* ; e.g.,

√*han* > *hanti* and *ghnanti*, and *āhata* : *āghāta*.

[19] OIA. *ñ*

1. *ñ* represents velar nasal, and can appear only before velar sounds ; e.g., *aṅka*, *saṅkha*, *aṅkhaya*, 'embrace', *aṅga*, and *jaṅghā*, 'leg'.

2. *ñ* cannot be used initially, but only medially and finally. "Before other consonants or as a final, it appears only when a following *k* or *g* has been dropped, as in stems ending with -*ñc* or -*ñj*- and in those compounded with -*dṛś*- ; e.g. *pratyāñ*, nom. sg. of *pratyāñc*- 'facing' ; *yūñdhi* (-*yūñj-dhi*), 2 sing. impv. of *yuj*- 'join' ; *kī-dṛñ*, nom. sg. of *kī-dṛś* 'of what kind'. [VG, §46a].

C-varga

The origin of palatal sounds in OIA can be traced from various sources such as, IE, Ilr., from OIA and from the influence of Prakrit. It is said that the palatal series in OIA are not the original sound, but they come from the above

Sources mainly from IE and Ilr.

[20] OIA. *c*

In general the sources of OIA palatal series can be traced from IE velars and labio-velars when followed by palatal vowels. They become palatalised first in IIr. and then palatal in OIA. For example :

OIA *c* < IE **q*, **qʷ* when followed by palatal vowels.

1. IE **q* > OIA. *c* : IE. **leuges* > OIA. *rocas*, Gk. *leukos*.

IE **qʷ* > OIA. *c* : IE. **qʷe* > OIA. *ca*, Gk. *te*, Latin. *que*.

2. *c* often comes from OIA combination between dental and palatal by means of assimilation, i.e. dental becomes palatal *c*. For example :

ut + *ca* > *ucca* (by assimilation).

mahat + *chatram* > *mahacchatram*.

[21] OIA. *ch*

1. The origin of OIA *ch* is very doubtful. It has not come directly from IE **qh* and **qʷh* and also from **k* or **kʰ*, but a combination of sibilant *s* may give rise to the combination of *cch* before palatal vowels. For example :

IE **gʷṣketti* > OIA. *gā-cchati*, Av. *jasaiti*, Gk. *báskō*.

2. The *ch* of *ga-cchati* as well as *icchati*, *pīcchati* etc. regularly would represent the IE **skh* before IE **e*. For example, for *gacchati* we can have **gʷṣkheti* as well. Except in this sort of combination the OIA *ch* is very rare, that is to say, there are rare instances in which *ch* has come directly from **kʰ*, **qh*, **qʷh*.

3. The initial *ch* in OIA in the word *chāyā* has also come from a combination of *s* + *k(h)* in IE as the Gk. example *skia* shows. So also, OIA *chinādmī* (I cut off), Av. *sid*, Gk. *skhazō* Lat. *scindō* from IE **sk(h)*. *ch* may also appear through assimilation, that is to say, dental *t* + *s* will give rise to *ch* as a case of assimilation. For example, *tat* + *śrutvā* = *tacchrutvā*.

[22] OIA. *j*

1. OIA *j* has come from three IE sources **ǵ*, **g*, **ǵʷ*. But

in the case of *g and *g^u, it is to be followed by a palatal vowel. For example,

IE *g > OIA. j ; IE *aĝō > OIA. *ajāmi*.

IE *g > OIA. j ; IE *auges > OIA. *ojas*, Lat. *augeō*,
Goth. *aukan*.

IE *g^u > OIA. j ; IE *g^uiyo > OIA. *jīvah*, Gk. *bios*.

IE *g^ueretai > OIA. *jārate*, OHG. *quirit*.

2. *j* has come from a combination of dental and palatal *j* through assimilation. For example :

tat + janya = tajjanya

ud + jiti = ujiti (victory).

3. *j* may come through the influence of Pkt. For example, in Pkt. *dy* becomes *j* and in OIA., particularly in Vedic, this *dy* through the influence of Pkt. becomes *jy* making it a Skt. word. From *√dyut* we have *jyoti* as coming from the weak-grade of *dyuti*.

4. *j* may come from a reduplicated root with *h* i.e., *hu* becoming reduplicated *juhu* as in *juhoti*. This *h* of course may be traced from the IE *gh, but in OIA it comes from the root with *h*. From *√hā* we have *jāhāti* (leaves), Av. *zazōiti*.

[23] OIA. *jh*

1. OIA *jh* which ultimately becomes *h* has come from IE *gh and *g^uh followed by palatal vowels. For example ;

IE *gh > OIA. *jh* > *h* : IE *dhrughes > OIA. *druhas* (OIA. *druhyāmi*) < *dhrujhas.

IE *g^uh > OIA. *jh* > *h* : IE *g^uhenmi > OIA. *hanmi* < *jhanmi.

2. In some instances *jh* may represent *h* which in PIA period was *jh* which again goes back to IE *gh*. For example,
ujjhita = ud + hita < *jhitás.

3. In most cases *jh* is a representation of onomatopoeitic sound. For example :

jhañkāra, jhañjhā, jhaṭiti, jhalajjhalā etc.

[24] OIA. *ñ*

1. OIA *ñ* represents IE *ñ*, and can only be found before or after the palatals ; e.g., *vañcanā, yācñā, vāñchantu*, 'let them desire', *yajñā, rañjana, jhañjhā*. *ñ* cannot be used initially.

T-varga

The origin of *t-varga* (cerebral sounds) in Sanskrit may be traced from various sources. It is generally believed that the cerebral sounds (*t-varga*) may be originated from the Indian soil though this may be partly true, because cerebral sounds as such are not found in any other branches of IE languages and therefore not recognised in IE either. However, for the origin of cerebral sounds in Sanskrit the following sources can be taken into consideration. These sources are—

1. From IE with the combination of *l*+dental as suggested by Fortunatov, which is otherwise known as Fortunatov's law. For example, *l*+dental=dental cerebralized

IE **paltos* > OIA. *paṭa-s*.

2. From IIr **zd* and *zdh*. For example,

IIr. **nizdas* > OIA. *niḍas*.

IIr. **astauzdhvam* > OIA. (Vedic.) *āstoḍhvam* (2 p.pl. aor. mid of *stāumi*)

3. From OIA with the interchange of dental and cerebral where cerebralization is regarded as a sort of spontaneous. For example,

atati and *aṭati* meaning 'to go',

4. From Dravidian influences. It is generally believed that the Sanskrit cerebral sounds have come from the Dravidian languages where cerebral sounds are profusely used. After having settled down in India, the Aryan people came in contact with the Dravidian people living in the south and gradually they acquired some of the words from Dravidian stocks. The cerebral sounds are, therefore, taken from the Dravidian stock in order to complete the five series of mutes. And the sounds *ḍ* or *ḷ* is a cerebral sound in Dravidian language and the Vedic people acquired that sound from the Dravidian. Whether this is true or not is still a matter of investigation, but as far as it stands it is still a sort of accepted norm. Some Dravidian examples showing the cerebral sounds are given below :

Dv. *ārabhaṭa*, Ka. *ārbaṭa*, Tu. *ārbaṭa*, Ta. *arbhaṭanu*.

Dv. *kathina*, Ta. *kaṭṭi*, Ka. *kaḍugu*, Tu. *gaṭṭi*, Te. *kaṭṭiḍi*.

Dv. *eḍa*, Ta. *yāṭu*, Ma. *āṭu*, Ka. *āḍu*, Tu. *ēḍu*, Te. *ēṭa*.

Apart from these, there are cases where the cerebral sound in Sanskrit may appear from old palatal sounds (*j, ś, h*). For example, we have *bhrāj* and *bhrāt* meaning 'lustre', *rāj* and *rāt* etc.

[25] OIA. *ṭ*

- [1] Cerebral *ś + t* become cerebral *ṭ* ; e.g., *vr̥ṣ-ti*, *vaṣ-ti* (= *vaṣṭi*).
- [2] Sometimes the origin of *ṭ* appears by Prakritism, in place of dental preceded by *r* (or *l*) ; e.g., *kṛta* : *kaṭa*, *kāṭa* : *karta*,
- [3] In a few instances *ṭ* appears in place of the cerebral *ś* ; e.g. ; *viprūt-* 'drop' from *pruṣ-* 'sprinkle', *dvīṭ* beside *dviṣ*.

[26] OIA. *ṭh*

- [1] Cerebral *ś + th* become cerebral *ṭh* ; e.g., *kāṣṭha*.
- [2] In some instances *ṭh* appears spontaneously ; e.g., *jaṭhara*.

[27] OIA. *ḍ*

- [1] **z/s + d* became *ḍ* ; e.g., *nīḍa* (< **nizda*), *īḍe* (< **izd-*).
- [2] In some instances *ḍ* appears by Prakritism, if preceded by *r* (or *l*) ; e.g., *taḍit*, *taḍa*, 'blow', *kūḍayati* 'singes'.
- [3] In some instances dental *d* is cerebralized owing to analogy of similar words ; e.g. ; *paḍbhis*, 'with feet.' (< **pad-bhis*).

[28] OIA. *ḍh*

- [1] *ś + dh* became *ḍh* ; e.g., *dīdīḍ-ḍhi* (< *dīś-* 'show'), *vivīḍḍhi* (*viṣ*, 'be active').
- [2] In some instances *dh* is cerebralized by Prakritism, e.g., *jaḍhu-* 'dull'.
- [3] "Before the *dhi* of the 2nd. sing. impv. the cerebral is phonetic in *dīdīḍhi*, from *dīś-* ; also in *z* (= *ś*) which after cerebralizing the *dh* is dropped, leaving a compensating length, in *tāḍhi* from *takṣ-* 'hew' (= IE *teǵzdhi*) ; also in *ṣo-ḍhā* 'sixfold' (for *ṣaṣ-dhā* : *aṣ-*, like *as-*, becoming *o* before a voiced mute). "[VG. § 43b3]

[29] OIA. *ṇ*

1. Apart from its origin by means of Fortunatov's law, or Dravidian influence, the origin of cerebral *ṇ* is mostly due to Prakrit influence; e.g., *kāṇa*, *kaṇa*, 'particle', *punya*, *pāṇi* etc.

2. *ṇ* appears before cerebral mutes, e.g., *vaṇṭaṇa*, *daṇḍa*.

3. It is due to a preceding *ṛ* or *r* or *ṣ*, the dental *n* is cerebralized, e.g. *pūrṇa*, *rṇa*, *Viṣṇu*.

4. Cerebral *ṇ* is not used initially or finally, except the word *sugaṇ* 'one who counts well', which is used finally.

T-varga

The IE *t-varga* in general is preserved in OIA. OIA. dental sounds come actually from IE dental sounds.

[30] OIA. *t*

1. OIA *t* comes from IE **t*. For example,

IE **anti* > OIA. *anti*, Gk. *anti*.

2. *t* often comes from the participial form *ant* with the elision of the medial nasal. For example,

gam + *ant* > *gacchant* > *gacchat*.

3. *t* may often come from *th*, being the first element of a reduplicated *t* coming from *th*. For example, *sthā* > *tiṣṭha*

[31] OIA. *th*

OIA *th* comes also from IE *th*; e.g. IE **rothos* > OIA. *rathas*.

[32] OIA. *d*

1. OIA *d* comes actually almost from IE **d*; e.g.,

IE **d* > OIA. *d* :—IE **dedorkā* > OIA. *dadarśa*.

2. *d* also comes as a first member from a reduplicated IE **dh*; e.g.,

IE **dh* > OIA. *d* :—√*dhā* > *dadhāti* (< **dhadhāti*).

[33] OIA. *dh*

1. OIA *dh* comes from IE **dh*; e.g., IE **dh* > OIA. *dh*;

IE **dhūmos* > OIA. *dhūmas*, Gk. *thūmos*, Lat. *fūmos*.

[34] OIA. *n*

1. The OIA dental *n* is originated from IE *n* ; e.g.,
IE. **ménos* > OIA. *mánas*, Gk. *ménos* ; OIA. *náman*,
Lat. *nomen*.
2. The dental *n* also appears by means of assimilation
with *t* or *d* when the *na* suffix follows ; e.g.,
tat + *na* > *tan-na*, *ad* + *na* > *an-na*.
3. In Sandhi *t* or *d* becomes *n* when *m* follows ; e.g.,
mṛt + *maya* > *mṛn-maya*.
4. The dental *n* appears in place of *m* before *t* ; e.g.,
gam + *tā* > *gan-tā*, *śram* + *ta* > *śrān-ta*.

P-varga

The origin of labial sounds can be traced from IE labial sounds.

[35] OIA. *p*

1. OIA *p* comes from IE **p* ; e.g.,
IE* *p* > OIA. *p* :—IE **apo* > OIA. *apa*, Gk. *apo*.

[36] OIA. *ph*

1. IE *ph* becomes *ph* in OIA, though *ph* is a very rare sound in OIA. For example,
IE **sphṛǵis* > OIA. *sphūrjati*.
2. By means of Grassmann's law, if a root begins with *ph* the first element of which will be de-aspirated.

[37] OIA. *b*

1. OIA *b* comes from IE **b* ; e.g.,
IE **b* > OIA. *b*. IE **bolom* > OIA. *balam*.
2. *b* may come from roots beginning with *bh* by means of Grassmann's law, the first element of which being de-aspirated.
bhū > OIA. *babhūva*, Gk. *pephūka*.

[38] OIA. *bh*

1. OIA *bh* comes from IE **bh* ; e.g.,
IE **bh* > OIA. *bh* ; IE **bherō* > OIA. *bharāmi*.
2. From *h* we often get *bh*. ; e.g., *gr̥hnāti* : *gr̥bhnāti*,
harāmi (I bear) : *bharāmi*.

[39] OIA. *m*

1. The OIA *m* comes also from IE *m*; e.g., *mātā*, Lat. *māter*, Gk. *mātēr*.

2. The labial *m* is found after a labial mute, e.g.; *dampati*, *pitāmbara*.

[40] OIA. *y*

1. OIA *y* has come from IE **i*, e.g.,

IE **i* > OIA. *y* :—IE **iugom* > OIA. *yugam*.

2. *y* sometimes appears after roots ending with *ā* before vowel suffixes; e.g., *√dā* > *dāyi*, *√dhā* > *adhāyi*.

3. Sometimes, in later Samhitās, *y* comes very rarely after palatals. For example, *tiraścyē* or *tiraśce*.

4. There is an interchange between *v* and *y* in Samhitās of the Yajurveda (which may be regarded as the influence of Prakrit.); *ātātāyin* (VS.) beside *ātātāvin*.

[41] OIA. *r*

1. OIA *r* has come from two IE sounds **r* and **l*; e.g;

IE **r* > OIA. *r* :—IE **āgros* > OIA. *ajras*.

IE **l* > OIA. *r* :—IE **kludhi* > OIA. *śrudhi* (Ved).

2. It is to be noted in this case that the distinction between *r* and *l* are dialectal, i.e. in some dialect in Vedic literature *l* is preserved whereas in the same root the *r* is preserved in other dialect. For example—

√car : *√cal*; *√rambh* : *√lambh*; *√ruc* : *√luk*.

That *l* is a dialectal feature is seen from the Ir. or. IIr. period, *l* is totally lost in Āvestan, whereas both *l* and *r* have come in Aryan as variants of dialects; hence the dictum in Skt. *ra-layor abhedah*.

[42] OIA. *l*

1. *l* is sometimes interchanged with *r*; e.g., *loman* : *roman*.

[43] OIA. *v*

1. OIA *v* has come from IE **u*; e.g.,

IE **u* > OIA. *v*. :—IE **ekūā* > *aśvā*.

2. *v* sometimes is found interchanging with *b*. For example, *vāṇa* and *bāṇa*.

3. *v* sometimes is found interchanging with *y*. e.g. *ātatāyin* and *ātatāvin*.

4. In two roots in which *v* is followed by *r*, an interchange of sonantal and consonantal pronunciation, together with metathesis takes place, i.e. $\sqrt{dhvr} > dhvrt$ and *dhrut* ; $\sqrt{hvr} > hvrt$ and *hrut* ; sometimes \sqrt{rudh} may be derived from \sqrt{rdh} .

[44] OIA. *ś*

1. OIA *ś* represents IE **k̑*. For example :—

IE **k̑* > OIA. *ś* :—IE **klutos* > OIA. *śrutas*.

2. *ś* may come finally from *s* when it is followed by a palatal sound in external sandhi, e.g., *devāś cakṛma*.

[45] OIA. *ṣ*

1. OIA *ṣ* comes from IE **s* which is lingualised in OIA. For example—

IE **s* > OIA. *ṣ* :— IE **st(h)ā* > OIA. *tiṣṭhāmi*, Gk. *histēmi*.

2. The cerebral may also come from other combination of IE **k̑ + t* > *ṣt*. IE **oktāu* > OIA. *aṣṭāu*.

3. The *ṣ* in *ṣaṭ* is not yet explained satisfactorily. It is often suggested that probably an initial consonant has been lost. For example :—cf. Avestan, *x-ṣ-vaś*.

[46] OIA. *s*

1. OIA *s* represents IE **s*. For example,

IE **s* > OIA. *s* :—IE **esti* > OIA. *asti*.

2. In the combination *-ts* and *-ps*, when they stand for etymological *-dhs* and *-bhs*, the *s* represents IE **zh* as in *gṛtsa* < \sqrt{grt} and *dīpsa* < \sqrt{dev} where the final aspirate of the root would have been thrown forward on the suffix as in *vuddha* < \sqrt{vudh} .

[47] OIA. *h*

Historically *h* is not an original sound in OIA and that is why, *h* is not recognised in IE. The origin of *h* can therefore be traced back from IE **ǵh*, *ǵh*, *ǵʰh*. For example—

1. IE **ǵh* > OIA. *h* :— IE **ǵhansos* > OIA. *haṁsa*

IE *gh>OIA. h :— IE *dhrughes>OIA. *druhas* (cf. *druhyāmi*).

IE *gʰh>OIA. h :— IE *gʰheros>OIA. *haras*.

2. *h* may appear from *dh* and *bh*. For example,

idha (vedic) : *iha* (cl.)

gṛbhnāti : *gṛhnati* (cl.)

bhr > *bharāmi* : *harāmi*

cf. Pkt. sūtra “*kh-gh-th-dh-bhām ha*”. Therefore it could be regarded as a sort of Prakritism.

3. In some cases or in PIA stages *h* may appear from palatal **jh*. For example :

OIA. *ujjhita* = *ut* + *hita*, which is *ut* + **jhitas* and then by assimilation *ujjhita*. This may be remotely connected with PIA *jh* which has come IIr **zʰh* which again has come from IE **gh*.

[48] *l* and [49] *lh*

The *l* and *lh* are two vedic sounds, not found in classical Sanskrit, but occur in Pāli. The origin of these two sounds are intervocal. When intervocalic *q* and *qh* are followed by vowels, the result is the voiced *l* and *lh* ; e.g., *ide* > *ile*, but *idya* ; *dṛlhā* etc. This seems to be very much dialectal which is recorded by Śaṅguruśiṣya in his commentary on Kātyāyana's *Sarvānukramaṇī* on RV. I. 28 as was current among the Bahvṛc group of people :

aj-madhyastha-ḍakārasya [a-kāraṃ bahvṛcā jaguh |

aj-madhyastha-ḍhakārasya [ha-kāraṃ vai yathākramam ||

ile mṛle puroḷāsam dṛlhā sālhā nidarśanam |

[50] *Visarjanīya* (: - ḥ)

The *visarjanīya* is a voiceless breathing sound represented by the symbol *[h]* standing for Indian [:] which again has come from final *s* or *r* in pausā. It is a glottal sound, and some say it is a chest-sound [*urasi visarjanīyo vā*. RT. 3]. *Visarjanīya* is an *ūṣman* (spirant) sound and its place of utterance is either glottal or chest [*kaṇṭhyokāraḥ prathamapañcamāu ca dvāvūsmānāu kecid etāvurasyāu*. RP. 1.18]. The

term *visarga*, though not used in *Prātiśākhya* or in *Pāṇini* is very common these days. *Visarjanīya* cannot be used initially.

[51] *Jihvāmūliya* (= :*k(h)*)

jihvāmūliya is a velar or guttural spirant represented by the phonetic symbol χ standing for Indian \asymp or :*k(h)*. When a *visarjanīya* is followed by *k* or *kh* (i.e., : or \asymp *k/kh*), it is called *jihvāmūliya*, 'formed at the root of the tongue' [\asymp *k* iti *jihvāmūliyaḥ. jihvāmūlena janyatvāt*]. *Patañjali* calls this by the term *ayogavāhavarṇa* [cf. *ayogavāhā vijñeyā āśraya-sthāna-bhāgināḥ*—PŚ]. Examples are *antaḥkaraṇa* (= *antaχ-karaṇa*), *duḥkha* (= *duχkha*) etc.

[52] *Upadhmāniya* (= :*p(h)*)

Upadhmāniya is a bilabial voiceless spirant represented by the phonetic symbol ϕ standing for Indian \asymp or :*p(h)*. When a *visarjanīya* is followed by *p* or *ph* (i.e., : or \asymp *p/ph*) it is called *upadhmāniya* or 'on-breathing', i.e., 'a sound blown from the mouth'. Examples are *antaḥpura* (*antaφpura*), [\asymp *p* ityupadhmāniya. upadhmānena janyatvāt—Mahābhāṣya]. *Patañjali*, however, calls this by the term *ayogavāha-varṇa*. [cf. *ayogavāhā vijñeyā āśraya-sthānabhāgināḥ*—PŚ].

[53] *Anusvāra* (◌̣)

anusvāra is a pure nasal sound written with a dot (◌̣) above the vowel. It is different from the five class nasals. It is used after vowels, but before sibilants and *h* sounds. Its pronunciation resembles class nasals. Sometimes *anusvāra* is merged with the vowel and becomes *anunāsika*. There is a difference between *anusvāra* and *anunāsika*, though some scholars deny any distinction between the two. "In any case, the Vedic MSS. have only one sign ◌̣ (placed either above or after the vowel) for both, employing the simple dot ◌̣ where neither *Anusvāra* nor *Anunāsika* is allowable. The latter sign is used in the TS. for final *m* before *y*, *v* and in both the TS. and MS. before mutes instead of the class nasal, a practice arising from carelessness or the desire to save trouble. There

is thus no ground for the prevalent opinion that ◌̣ represents Anunāsika and ◌̣ Anusvāra." [VG. §60].

Anusvāra can be used medially or finally. Medially it is used before sibilant and *h*; e.g., *vaṃśa*, *jighāṃṣā*, *hiṃṣā*, and *siṃha*.

Anusvāra appears before *ṃs* (<*ns* or *ms*); eg; *jighāṃṣati* (des. from *han-*), *pīṃṣanti*.

"When Anusvāra appears before *ś* and *h* derived from an IE palatal or guttural, it represents the corresponding class nasal. The reduction of these old nasals to Anusvāra is probably IIr. after long vowels (*ām*, -*īṃr*, -*uṃr*); probably later after short vowels, for it does not appear in forms like *āhan* (for *āhans*), though *s* was not dropped after *an* in the IIr. period; but the *s* must have been dropped early in the Indian period, before -*ans* became -*aṃs*. Anusvāra before *h* (Av. *nj*) must have arisen in the Indian period." [VG. §60a].

[54] *Anunāsika* (◌̣) [Nasalization]

When a sound is uttered through the nose and mouth together, the sound is called *anunāsika* ('after-sound'). [cf. *mukha-nāsikā-vacano'nunāsikaḥ*. Pā. I. 1.8]. In an *anunāsika*, the vowel is nasalized. The sounds which could be nasalized are the vowels (*ā*, *ṛ*, *ī*, *ū* etc.) and semivowels (*ṃ*, *ṛ*, *ī*). The source of nasal sounds are the class-nasals (*ñ*, *ṇ*, *ṅ*, *n*, *m*). The quality of sound is different from *anusvara*.

In Vedic sometimes this *anunāsika* sound is found in Sandhi where the nasal sound is elided making the vowel a nasalized one. For example, *sa devā eha vakṣati* (RV. I. 1.2), *yaḥ parvatān prakupitā aramṇāt* (RV. II.12.2), *maho devo martyā ā viveśa* (RV. IV. 58.3), *yo grhā abhiśāsati* (RV. VI.54.2). In Vedic this nasalization is represented by the symbol (◌̣ = ~). In classical Sanskrit sometimes nasalization occurs due to the influence of *l* preceded by a nasal sound, eg., *mahān-lābhah* > *mahāllābhah*, *bhavān-labhate* > *bhavāllabhate*.

III. Conjuncts/Clusters

A conjunct is a combination of two or more consonantal sounds without any vowel in between (*halo'nantarāḥ saṃyogaḥ*. Pā. 1.1.7). A conjunct is not separated by vowels.

The origin of conjunct consonants in OIA can be traced from IE as well as from Ilr, the major development being within its own territory. In IE conjunct could stay with all sorts of consonants, though in actual usage this was not always the case, as their developments in OIA and other languages show.

The conjuncts in OIA could be made with two, three, four or five consonants. The conjuncts with two or three are regular, but those with four or five are very rare; conjuncts with two are *śakta*, *dagdha*, *prāpti*, etc., with three *harṃya*, *dharmya*, etc., with four *bhukṣtvā*, *tārṣya*, *bhartsyate* etc. But with five there is only one *kārtsnya*.

The combination of consonant clusters in OIA is varied. This combination could be possible with the same class of consonants or with heterorganic clusters. A tentative schemata are given below to understand the combination of consonant clusters.

- [1] Plosives with plosives including the class nasals,
- [2] Plosives with semi-vowels,
- [3] Plosives with sibilants,
- [4] Heterorganic plosives,
- [5] Semivowels with semivowels,
- [6] Semivowels with sibilants,
- [7] Semivowels with plosives,
- [8] Sibilants with sibilants,
- [9] Sibilants with semivowels,
- [10] Sibilants with plosives.
- [11] *h* with semivowels.

Though all sorts of combination with the above schemata are possible, in reality, all the combinations are not available in Sanskrit. For example, a combination between a velar and a palatal, between a velar and a cerebral, between a cerebral and a dental or labial plosives, is not really available.

CHAPTER THREE

Accent

Accent is one of the chief characteristic features of IE language. It is mainly preserved in Old Indo-Aryan (Vedic Sanskrit) and Greek. In other IE languages, the texts are not marked by accent, but its influence is strongly felt through the medium of loss, shortening or lengthening of vowels. In some cases, of course, the accent is preserved in some words to show the difference in meaning. But these are sporadic and the remnants of primitive accent system.

§1. What is accent ?

By accent (<L. *accentus*, 'speaking tone') we understand 'the pitch of voice'; i.e., it tells 'the highness or lowness of tone.' The Sanskrit word *syāra* also means 'the high or low tone in recitation' (*svaranti śabdāyante svarāḥ*). It was predominantly musical. The Latin word *accentus* is a translation of the Greek word *prosōidia* (Eng. *prosody*) meaning 'variation in pitch of the speaking voice'. Therefore in its widest sense by accent "is meant the gradation of a word or word-group according to the degree of stress or of pitch with which its various syllables are uttered. Although strictly speaking there are as many different degrees of accent in a word or word-group as there are syllables, yet for ordinary purposes it is only necessary to distinguish three grades, the principal accent, the secondary accent, and the weak accent (or absence of accent). The secondary accent is as a rule separated from the principal accent by at least one intervening syllable."

[CGGL, p. 88]

For Example,

OIA. *āpa-citiḥ* = Gk. *apótisis* (<**āpotisis*),

OIA. *bhāramāṇaḥ* = Gk. *pherómenos* (<**phēromenos*),

OIA. *jānaḥ, jānāsaḥ* = Gk. *génos, géneos*,

OIA. *mādhū* = Gk. *mēthu*,

OIA. *pāt, padāḥ, patsú* = Gk. *pōs, podōs, posí*,

OIA. *pitā, pitāram, pitṛsu* = Gk. *patēr, patēra, patrāsí*,

OIA. *dūhitar* = Gk. *thūgater*,

OIA. *bhrātaraḥ* = Gk. *phrātores*.

§2. IE accent : pitch and stress

Accent is of two types : pitch and stress. Pitch accent is marked by frequency of vibration, i.e., the highness or lowness of tone. That is why, it is also known as *musical*. As tone plays a prominent part in pitch, it is also known as *tonic*. As pitch modifies the normal scale by the use of accidents, it is also called *chromatic* (<Gk. *chrōmatikós*). *Intonation* is another name given to it. Stress is, on the other hand, characterised by intensity of vibration and by muscular effort of the articulatory organs involved therein. As stress-accent mainly depends on the muscular energy where exertion of bodily air is involved, it is called *expiratory* or *respiratory* accent. In the stress-accent the accented syllable sounds louder, because all the force of breath is spent on it. It is also known as *dynamic*.

With regard to the accent system of IE opinion differs. Some say IE had pitch accent, others say IE had stress only. A third group of people thinks that IE had originally stress accent in the primitive stage, and then it developed into pitch. But considering the nature of accent in all the IE languages, it can be said that IE accent was partly pitch (or musical) and partly stress (or expiratory). Any one of them normally predominates in each language. Thus in Vedic Sanskrit and in Greek, the accent was predominantly pitch, but traces of stress could also be gathered from the loss of accent in the weak-grade of ablaut. In other branches of IE languages the accent was predominantly stress. Thus in the oldest periods of Armenian, Lithuanian, Germanic, Celtic and Italic, the accent was mainly stress. We have no knowledge of accentuation of the old Iranian (mainly Avestan) and of the Old Bulgarian. The effect of stress accent is the weakening or loss of the unaccented syllables. The quantitative ablaut perhaps depended upon the assumption of stress-accent in PIE, whereas the qualitative ablaut was probably connected with the pitch accent. In Vedic and Greek the texts are marked by accent, and in other branches the texts are not marked by accent.

The Verner's law presupposes the existence of accent in the primitive Germanic languages.

§3. *Position of accent : free and fixed*

As IE had pitch or stress accent, the position of accent in IE was also either free or fixed. It was free, because the accent used to move from one syllable to other, and it was also fixed, when the accent used to fall on a particular syllable irrespective of any inflexion whatsoever. In Vedic and Greek, the accent was free. In Vedic accent may stand on any position—initial, medial or final. In Greek also the accent was free ; but in Greek we have also relatively fixed accent, because it is restricted to the last three syllables. For example, Skt. *pāda* 'foot' (acc.), but *padāḥ* (gen.), Gk. *póda* (acc.), but *podós* (gen.).

§4. *Kinds of accent*

In IE, there were three kinds of accent : acute (Skt. *udātta*, Gk. *oxeia*), grave (Skt. *anudātta*, Gk. *bareia*) and circumflex (Skt. *svarita*, Gk. *perispōmenos*). The acute accent is marked by $\acute{_}$, the grave by $\grave{_}$, and the circumflex by \frown or \smile . In Vedic *udātta* is not shown by any mark, *anudātta* by a short horizontal stroke below ($_$) and *svarita* is marked by a short perpendicular stroke above (\perp). Both the Vedic and Greek texts are marked accordingly.

§5. *IE accent in Vedic and Greek*

IE accent, whether pitch or stress, can be determined by the accentual agreement between Vedic and Greek accent system. Though in some cases, Greek accent differs from Vedic, there are many words which have the same accent between the two. A few examples can be cited :

IE **podós* > OIA. *padāḥ* (gen. of *pāt*, Doric *pós*), Gk. *podós*,

IE **ékya-s* > OIA. *ásva-h*, Gk. *híppos*, Goth. *athwas*.

IE **dhūmós* > OIA. *dhūmāḥ*, Gk. *thūmós*.

IE **iāgnós* > OIA. *yajñás*, Gk. *hagnós*.

IE **médhu* > OIA. *mádhu*, Gk. *méthu*.

IE **nébhos* > OIA. *nábhas*, Gk. *néphos*.

In numbers, the agreement between the Vedic and Greek is also noticed ; e.g.,

- IE *tréies > OIA. tráyah, Gk. treis,
 IE *pénque > OIA. pāñca, Gk. pente, Goth. fimf.
 IE *septn̥' / m̥ > OIA. sapta, Gk. heptá.
 IE *oktōu > OIA. aṣṭā(u), Gk. októ.
 IE *dék m̥ > OIA. dáśa, Gk. deka, Goth. taihun.

Words and forms in trisyllabic also agree between the two ;
 e.g.,

- IE *patéres > OIA. pitáraḥ, Gk. patéres.
 IE *dhūghater > OIA. dūhitar (Voc.), Gk. thūgater (Voc.)
 IE *oktōpōs > OIA. aṣṭāpāt, Gk. oktōpous.
 IE *ǵenetēr > OIA. janitā, Gk. genetēr.

§6. IE accent in Vedic and Germanic

Whether primitive Germanic languages had a pitch accent or not is not easy to determine now. But Verner's law tells us that primitive Germanic had an accent system which agreed quite clearly with the Vedic accent. The general assumption is that PGm. had a fixed accent, no matter what the inflectional form of the word was. The PGm had an accent on the root syllable, but IE accent had the variations. Sometimes it had the accent on (i) the root syllable, e.g., Gk. *lógos*, 'word', sometimes, on (ii) the suffix or termination, e.g., OIA. *é-mi* 'I go', but *i-más*, 'we go', sometimes it had a (iii) variable accent, e.g., Gk. *núx* (nom. sg.), but *nuktós* (gen. sg.). "The shifting" or "variable" accent was a characteristic also of the most primitive Gme. until a period subsequent to the change of IE *p, t, k* to *f, þ, h*. In late Gme, however, the accent shifted to the root syllable, where it remained in old English." [Moore and Knott, pp. 117-18]. However, below are given some examples to show the identical accent between Vedic and Germanic :

- IE. *k̑ntóm > OIA. śatám, Gk. he-katón, Lat. centum, PGm.
 *χunḑóm, older *χumḑóm > Goth. OE, *hund*, OHG.
hunt.

IE *septn̥' > OIA. *saptá*, Gk. *heptá*, Lat. *septem*, Goth. *sibum* (<PGm *siðún);

IE *pǣtēr > OIA. *pitár*, *pitá* > Gk. *patēr* > PGm. *faðēr* < *faþēr > Goth. *fadar*, OE. *faeder*, OS. *fader*, OHG. *fater*, O.Icl. *faðir*.

IE *ulqut̥ > OIA. *vṛktī*, > PGm. *ulguī-s < ulχut̥s > cf. Goth. *wolfs*, Icelandic *ylgr*.

IE *ǣtmōn > OIA. *ātmā* > PGm. *ēðmēn < *ēþmēn > OHG. *ātum*, OS. *āðom*.

IE *quitūs > OIA. *ketúh* (bright), > PGm. *χaiðús* (< *χaiþús), Goth. *haidus*.

§7. The IE accentuation

The position of IE word and sentence accent can be determined only through the comparison of Sanskrit, Greek and primitive Germanic (Verner's law). The word-accent was free which is better preserved in Vedic than in any other IE languages. For example,

IE *pǣtēr > OIA. *pitá*, Gk. *patēr*, Goth. *fadar* (<PGm. *faðēr*).

IE *bhrátēr > OIA. *bhrátā*, Gk. *phrátēr*, Goth. *broþar* (<PGm. *brōþār).

IE *oktō(u) > OIA. *aṣṭāu*, Gk. *oktō*.

IE *ēi-mi > OIA. *ēmi*, Gk. *eîmi*.

IE i-més > OIA. *i-más*, Gk. *imēs*

In the sentence-accent, the enclitics are not accented ; e.g.,

IE *que > OIA. *ca*, Gk. *te*, Lat. *que*.

IE *uē > OIA. *va*, *vā*, Gk. *ē-e* (< *Fe), Lat. *ve*.

IE *quo/*qui > OIA. *ka-ci*, Gk. *po/ti*, Lat. *quo/qui*.

IE *moi > OIA. *me*, Gk. *moi*.

In IE, the augment *e was accented ; e.g.,

IE *édṛket* > OIA. *ádṛsat*, Gk. *édrake*,

To understand the accent system, one passage from Vedic and another from Homer are quoted with their accent mark used in the text. The Vedic passage when in Roman script shows only the acute accent mark.

Agnīm ile purōhitam,

yajñásya devām ṛtvijam|

hótaram ratnadhātām || [RV. I. 1. 1.]

Eng. Tr. : "I praise Agni, the priest, the divine ministrant of the sacrifice, the invoking priest (*Hotāram*), the greatest giver of wealth."

Mēnin deide, theá, Pēlērādeō Akhilēos
'oulomēnēn, hē muri' Akhaiois álge' éthēke,

[Iliad. I. 1-2]

Eng. Tr. : "Sing, O goddess, the baneful wrath of Achilles, the son of Peleus, which brought countless griefs upon the Achaeans."

§8. Importance of accent

Apart from the fact that accent plays a prominent part in ablaut, the importance of accent lies elsewhere also. Accent often determines the meaning of a word in most of the IE languages. Thus in Vedic we have *ápas* (work) : *apás* (active); *ánga* (limb) : *angá* (emphatic particle); *yásas* (glory) : *yaśás* (glorious); *bhūman* (earth) : *bhūmán* (abundance); *té* (they) : *te* (yours) where the accent on the first and on the second determines the change of meaning.

In Greek also the same phenomenon occurs. Thus *agnós* (pure) : *ágnos* (kind of willow); *agós* (a leader) : *ágos* (wickedness); *aná* (prep. up) : *ána* (voc. of *ánaks*, king); *bíos* (life) : *biós* (bow); *brotós* (a mortal) : *brótos* (gore); *múria* (innumerable) : *múria* (ten thousand).

In German though the accent is not marked, but in pronunciation the stress on the first of the word *übergehen* means "across", "going over" and the same on the penult means "overlook". In English *cónduct* (behaviour) : *conduct* (guide); *pérfect* (make perfect) : *perfect* (without fault).

In French also accent serves a useful distinction between words in spelling and pronunciation; e.g., *la* (the) : *là* (there); *ou* (or) : *où* (where); *du* (of the) : *dû* (owed); *la mère* (the mother) : *la mèr* (the sea).

In determining the meaning of a word we must consider the position of accent, at least, in Vedic and Greek.

CHAPTER FOUR

Ablaut

§1. *What is ablaut ?*

The word “ablaut” comes from the German word “ab” (= Skt. *apa*) meaning “off” and “laut” (= Skt. *śruti*) meaning “sound” ; and therefore literally it means “off the sound”, i.e. ‘change of the (vowel) sound’. This change of the vowel could be qualitative (back to front) or quantitative (shortening, lengthening or weakening) or both of the vowel phenomenon for the morphophonemic analysis between etymologically or morphologically related words or parts of words. This change of vowel may be due to accent.

Therefore by ablaut we understand “such quantitative, qualitative and accentual differences in the vocalic elements of groups of etymologically and morphologically related words as were caused by sound-laws which operated in the primitive Indo-European language before it became differentiated into the separate languages.” [CGGL p. 49]. For example, the following, which stand in ablaut relation to one another, can be cited :

- (1) Skt. *pācā-mi* : *pākaḥ* : *paktās* (cooked)
Skt. *svapana-* : *svāpa-* : *supta-*.
- (2) Gk. *leípō* : *lélōipa* : *élipon*
pódos : *pōs* : *epibdai*.
- (3) Lat. *dātus* : *dōnum*
pedem : *pēs*
- (4) Goth. *aúhs-in* (loc. sg.) : *aúhsa-ns* (acc. pl.) : *aúhs-nē*
(gen. pl.) of *aúhsa* (ox).

§2. *Its different names*

Ablaut is also known as *Vowel-gradation*, because it is the gradation of vowels, i.e., the change of vowels of a word to indicate difference in meaning. Vowel-gradation may be *qualitative* as one vowel may be changed to another vowel

which differs in quality (back to front), or it may be *quantitative*, because the vowels could be lengthened, or shortened or completely lost.

In a similar sense, *vocal or vowel alternance* (Fr. *Alternances vacaliques*) is used. This term is mainly preferred by the French philologists.

Another term *apophony* (<Gk. *apo* = *ab*, 'away', 'from' + '*phōnē*, 'sound' = *laut* = *apophōneia*) > Lat. *apophonia* > Fr. *apophonie* > Eng. *apophony*) indicates the cause of the vowel change which is due to accent.

Considering the phonetic equation of ablaut, Suniti Kumar Chatterji has translated it as *apaśruti* (*apa* standing for Ger. *ab* = Gk. *apo* and *śruti* < *śrut* for Ger. *laut* = Gk. *klutōs*). As the Greek word *klutōs* is used in the sense of famous and not as sound, the Greek word *phōnē* < *phoneō*, 'to produce sound' is used instead. So *apaśruti* is phonetically equated with ablaut.

A distinction can be made between ablaut and vowel-gradation. The term ablaut can be used where there is a *qualitative* change of the vowel, whereas the vowel-gradation stands for *quantitative* change. Hence some scholars believe that Sanskrit has only vowel-gradation, because the Sanskrit grammarians have only noticed the quantitative change of the vowel in *guṇa*, *vrddhi* and *samprasāraṇa*. As the IE vowels **ā*, **ē* and **ō* became *ā* in Sanskrit, there cannot be any qualitative change of the vowel in Sanskrit, and therefore there is no qualitative change in Sanskrit. When the front vowel alternates with the back vowel (i.e. *e* : *o*), this is qualitative change which is found in Greek and partly also in Latin. For example, *leipō* : *lēloipa* : *ēlipon* ; *pherō* : *phōros* ; *patēr* : *eupátōr*. The cause for this change of *e* into *ō* is not easy to account for. Greek also interchanges between *ā* and *ō*, e.g., *phāmi* : *phōne*.

It is to be noted that some scholars believe that the qualitative ablaut depended on the position of stress, while the quantitative ablaut depended on pitch. This assumption explains the existence of two types of accent in IE.

In Latin, on the other hand, ablaut has been to a considerable degree eliminated by the generalization of one or the other grade, and while it is still reflected by certain occasional alternations, it has ceased to play any such significant rôle as in Greek.

They are to be distinguished from those alternations which have arisen under the special phonetic laws of a particular language, as in Latin. *faciō*, *ad-ficiō*, *adfectus*, where one may at most speak of a secondary vowel-gradation. In other IE languages, ablaut is not as conspicuous as in Sanskrit and Greek.

§3. History of Ablaut

The word ablaut was first used by Jacob Grimm in the first edition of his *Deutsche Grammatik* published in 1819 from Berlin. In the second edition he revised this phenomenon to a great extent probably influenced by Rasmus Kristian Rask, but did not discuss the problem elaborately. But in the third edition of his *Geschichte der deutschen Sprache* (Berlin 1st. edn. 1848), he for the first time scientifically discussed the phenomenon. But A. Holtzmänn in his *Ueber den Ablaut* published at Carlsruhe in 1844 thought for the first time that accent was responsible for the ablaut and he explained the changes of German *singen* : *sang* : *gesungen*—English *sing* : *sang* : *sung* as due to ablaut. Holtzmann was the first to say that the so-called “grammatical changes” (*grammatischer wechsel*) was also due to accent, for example, Goth. *ƿarf* (I need) : *ƿaúbum* (we need). Later on, the same reason was also advanced by Karl Verner. That the change of vowel in ablaut is due to accent was also suggested by L. Benloew in his *De l'accentuation dans les langues indo-européennes tant anciennes que modernes*. H. Hirt in his *Indo-germanischer Ablaut*, published from Strassburg in 1900 dealt with the problem afresh, and this was again revised in his *Der Indo-germanische vocalismus*, Heidelberg, in 1921, which was the second volume of *Indo-germanische Grammatik*. This ablaut

problem was further discussed by H. Güntert in his *Indo-germanische Ablaut problem* in 1916 published from Strassburg.

§4. Postulation of Ablaut in IE

Ablaut is one of the distinguishing characteristics of the IE languages. Comparing the various forms derived from one root in various branches of IE languages, such as, Sanskrit, Avestan, Old Persian, Greek, Latin, Gothic, English, Old Irish, Old Church Slavonic, Lithuanian and others, ablaut is quite conspicuous and vital feature in the interrelations of Greek forms, as it is also in Sanskrit and other languages. This change is not *ad hoc*, but in a regular and systematic process. For example,

Gk. *peithō* : *pépoitha* : *épithon*

leipō : *lèloipa* : *élipon*

pódas : *pōs* : *epibdai*

Lat. *fidō* : *foedus* : *fidēs*

dātus : *dōnum* :

pedem : *pēs*

Goth. *aúhs-in* (loc. sg.) : *aúhs-an-s* (nom. pl.) : *aúhs-n-é* (gen. pl.) of *aúhsa* (ox).

In the Germanic languages, ablaut is mainly found in the strong verbs, as is seen in the following Gothic examples :

giutan (to pour) : *gaut* (he poured)

witan (to know) : *un-weis* (unknowing, ignorant)

bindan (to bind) : *bandi* (band, bond) : *ga-bundi* (bond)

bairan (to bear) : *barn* (child) : *bēr-usjōs* (parents) : *baür* (son)

man (I think) : *muns* (thought)

ga-tairan (to tear in pieces) : *ga-táura* (a tear)

giban (to give) : *gabei* (gift)

dags (day) : *ahtaú-dōgs* (eight days old)

saihan (see) : *sah* : *sēhum* : *saihan*

lētan (to let) : *lailot* : *lailotum* : *lētans*

In English language this phenomenon is also observed in indicating (i) tense-change in strong verb, or (ii) in plurals.

(i) bind : bound : bounden ; bear : bore : born ; see : saw : seen : sight ; sing : sang : sung ; give : gave : given : gift ; drive : drove : driven : drift ; thrive : throve : thriven : thrift.

(ii) man—men ; money—mint ; book—beech ; doom—deem ; brother—brethren.

Even in old Irish this change of vowel is observed in determining the change of meaning ; e.g.,

<i>ttag</i> (I go)	: <i>techt</i> (going)
<i>melim</i> (I break)	: <i>mlith</i> (to break)
<i>saidid</i> (to arrange)	: <i>sid</i> (agreement)
<i>il</i> (many)	: <i>uile</i> (all)
<i>lín</i> (number)	: <i>lân</i> (full)

So also in Lithuanian ; e.g., *vežù* (I go) : *vāžis* (sledge)

Old Church Slavonic : *tekò* (I run) : *tokŭ* (stream, flow) : *točiti* : *těxŭ* (= *teksom*) : *pre-těkati*, *ras-takati*.

Considering all these examples in different IE languages, it is postulated that IE had also this ablaut system which was reflected in other cognate branches of IE languages. In IE the ablaut system was like the following :

IE	* <i>ed</i> : * <i>od</i>	<i>ēd</i> : <i>ōd</i>	- <i>d</i>
OIA	<i>atti</i> (< <i>ad</i> + <i>ti</i>)	: <i>āda</i> (pf)	: <i>ad</i> + <i>ant</i>
	<i>adana</i>		= - <i>d</i> + <i>ant</i>
	<i>anna</i> (< <i>ad</i> + <i>na</i>)		= <i>danta</i> (that which eats),

§5. Causes of Ablaut changes

Though the causes which lay behind the ablaut phenomenon in the PIE cannot be determined satisfactorily, the prime factor of ablaut change was doubtless the *system of accentuation* which prevailed at different periods in the PIE language. There were also several other factors more or less connected with accent, such as, (i) vowel contraction, (ii) lengthening of vowels by compensation for the loss of a vowel in the next syllable, (iii) metrical lengthening, (iv) numerous analogical formations, (v) the mixing up of the

various ablaut-series through the influence of analogy. As all these vowel-changes and probably many others connected with ablaut took place long before the separate languages came in existence, it is practically impossible to determine their chronological order, or to be certain, about the precise nature of the vowel-changes.

§6. *Types of Ablaut*

The vowels which stand in ablaut relation to each other differ in quality, or in quantity, or both in quality and quantity. Therefore, we have qualitative, quantitative or qualitative-quantitative ablaut.

(i) *Qualitative ablaut*

Qualitative ablaut (i.e., *e* : *o* vowels) is usually explained as occurring in syllables which "have the strong grade of ablaut and is for the most part confined to the interchanges of *e* : *o*, and of *ē* : *ō* in the *e*-series of ablaut." [CGGL, p. 50]. In Greek the qualitative ablaut is best observable. For example,

Greek :

légō (I say) : *lógos* (word),
lelpō (I leave) : *lēloipa* (I have left) : *ēlipon* (I left),
tréphō (I nourish) : *tétropha* (I have nourished) : *trophē*
 (nourishment),

phérō (I bear) : *phóros* (burden),
dérkomai (I see) : *dédorka* (I have seen) : *ēdrakon* (I saw),
titthēmi (I hold) : *thōmos* (= OIA. *dhāmah*) : *thetos*
 (OIA. *dhitah* = *hitah*)

pēda (foot) : *pōda* : *pōs* : *epibdai*
patēr : *eu-pátōr* : *patrásī*

Latin :

tegō (I cover) : *toga* (covering, mantle)
 cf. Germ : *Decken* (to cover) : *Decke* (covering) : *Dach* (roof)
fidō (I believe) : *foedus* : *fides* (belief)
dō (I give) : *dōnum* : *datus* (OIA. *dattah*)
canō (I sing) : *ceceni* : (I sang) : *cantus* (song).

In these instances we find the vowels of the *e*-series change to those of the *o*-series. "The interchange between the *e* and *o* and between \bar{e} and \bar{o} seems to have been so regulated that \bar{e} originally stood in the chief accented syllable and \bar{o} in the next following syllable." [CGGL, p. 50]. The above is clarified by Taraporewala in the following manner:—"The explanation offered for this change is that *e* being a front-vowel and *o* a back-vowel, the former has naturally a higher pitch than the latter. Hence when the accent shifts from an originally accented front-vowel, the latter is changed to the corresponding lower-pitched vowel of the *o*-series." [ESL, p. 174]

(ii) *Quantitative* and (iii) *Qualitative-quantitative*

Quantitative and qualitative-quantitative ablaut mostly arose through the loss or weakening of vowels in unaccented syllables. e.g.,

Gk. *t-men* : *ef-mi* = OIA. *t-máh* : *ě-mi*.

Lat. *datus* : Gk. *dí-dō-mē* = IE. *a* : \bar{o} .

"The stress accent must have been more predominant than the pitch accent at the time quantitative ablaut came into existence, because it is only upon this assumption that we are able to account for the weakening and eventual loss of vowels in unaccented syllables." [CGGL, pp. 50-51]

§7. *Indo-European Ablaut series and grades*

The IE language had four series of ablaut, based on *e*, \bar{e} , \bar{o} and \bar{a} vowels. Besides the above four, Hübschmann, Brugmann, Bartholomae, Wright and others assume an *a*-series and *o*-series also.

Saussure thinks that the long vowels \bar{e} , \bar{o} , \bar{a} are nothing but contractions of *e* with a short vowel and considers the \bar{e} -, \bar{o} - and \bar{a} -series as coming from *e*-series.

It is due to accent or no accent the vowels *e*, \bar{e} , \bar{o} , \bar{a} can be weakened to such an extent that the radical vowel could be lost leaving no trace at all, or they could be reduced to *a*, i.e., $e > a$, $\bar{e} > e > a$, $\bar{o} > o > a$, $\bar{a} > a > a$.

Besides these, the original vowel may be found accented also and so we have an ablaut $e : o$, $\bar{e} : \bar{o}$, $\tilde{a} : \bar{o}$, but the vowel \bar{o} is not met with in a modified form.

The Indo-European had, therefore, four series of ablaut :

(1) e -series, (2) \bar{e} -series, (3) \bar{o} -series, and (4) \tilde{a} -series. Each of them is accompanied with semi-vowels ; but e -series has also nasals and liquids.

Each series has got three grades or steps : (1) Strong or Normal grade, (2) Lengthened grade and (3) Weak grade, which is again sub-divided into two : (i) reduced grade with secondary accent, and (ii) zero-grade without accent.

The IE ablaut starts with a normal grade and in the normal grade the vowel is found under the main accented form ; e.g., OIA. \acute{e} -mi : i -mās ; Gk. $p\acute{o}da$ (acc.) ; Lat. $p\acute{e}dem$.

The lengthened grade may or may not bear the original accent, but occurs under the accent when an unaccented vowel originally following the accented vowel has disappeared ; e.g., Doric. $p\acute{o}s$ (nom) ($< *p\acute{o}d-s$) and Lat. $p\bar{e}s$ ($< *p\acute{e}d-s$). It is lengthening to compensate for the loss of a phoneme.

The weak grade is their root forms or unaccented forms and is, therefore, always accentless in the reduced or zero forms.

Examples :—

I. e-series :

Strong/Normal grade		Lengthened grade		Weak grade	
e : o		ē : ō		Reduced Zero	
(i) IE	*ped : *pod	*pēd : *pōd		*pēd : *pōd > *bd	
OIA.	padam	OIA.	pādam	OIA.	pidamāna : upabdd (Vedic)
Gk.	padi		pāt	Gk.	: epiddai
	: pōdos	Doric.	: pōs	Av.	: frabda
Lat.	pedis :	Lat.	pēs :		
		Goth.	fōtus		
(ii) IE	*pet : *pot	*pēt : *pōt		*pēt : *pt	
OIA.	patati	OIA.	pātayati	OIA.	pitsati : apaptan
Gk.	pétomai : potōmai		apāti	Gk.	eptōmēn
	: potmos	Gk.	: pōtōmai		
cf. Goth.	gibans : gaf (gifts)	cf. Goth.	gebūm :		

Strong/Normal grade		Lengthened grade		Weak grade	
				Reduced	Zero
e : o		ē : ō		ə	×
(iii) IE	*pater : *pator	*pētēr : *pētōr		×	*pētr
OIA.	pitāram	OIA. pitā, apitā		OIA. pitrā	
Gk.	patēr : eupátora	Gk. patēr : eupátōr		Gk. patrós	
(iv) IE	*bher : *bhor	*bhēr : *bhōr		*bhār : *bhr	
OIA.	bharati	OIA. bhārah		OIA.	bhṛtaḥ
Gk.	pherete : boulē-phōros			Gk.	pharētēr : diphros
	pherō				(chariot-beater)
Goth.	balram : bairans	Goth. bērum :		Goth.	bar :
(v) IE	*meno : *mono	*mēno : mōno		*māno : *mno	
OIA.		OIA. bharamāṇah		OIA.	bharimna
Gk.	*pheromenos :			Av.	baramna

II. ē-series:

Strong/Normal grade	Lengthened grade	Weak grade	
		Reduced	Zero
ē : ō	×	ə	×
(i) IE *dhē : *dhō (to put)	...	*dhə- :	*dh
OIA. dadhāmi	...	Vedic dhītaḥ	dadhāmāḥ
Gk. titḥēmi : thōmos, thōē	...	Cl. hitaḥ	
Goth. : dōms (judgment)	...	Gk. thetós (< *thatos), tithēmen	
(ii) IE *sē (to throw) : *sō	...	*sə :	*s
Gk. hēmi :	...	Gk. hetós : OIA. s-trī	
Lat. sēvi :	...	Lat. satus :	(woman)
Goth. safsō :	...		
(iii) IE *fēg : *rōg	...	*rəg :	*r
Gk. rhēg-numi : érrōga (I break) (I broke)	...	Gk. errágē : (it was broken)	

III. *ō*-series :

	Strong/Normal grade	Lengthened grade	Weak grade	
			Reduced	Zero
IE <i>ō</i> : ?		...	ə	×
IE <i>*dō</i> : ?		...	<i>*dā</i>	<i>*d-</i>
OIA. <i>dādāmi</i> :		...	OIA.	<i>dadmāḥ</i>
<i>dānam</i> :		...		<i>d-ttaḥ</i>
Gk. <i>didōmi</i> :		...		<i>deva-ttaḥ</i>
<i>dōron</i> (gift) :		...		(vedic)
Lat. <i>dōnum</i>		...	Gk. <i>dānos</i> :	
		...	<i>dōtos</i> (< :	
		...	<i>*datos</i>) :	
		...	<i>do-sis</i> :	
		...	(gift) :	
		...	Lat. <i>datūs</i> :	
IE <i>*pō(i)</i> : ?		...	<i>*pī</i> :	<i>*p.</i>
OIA. <i>pātum</i> :		...	OIA. <i>pītaḥ</i> :	
Gk. <i>pōma</i> :		...	Gk. <i>pīnō</i> :	
Lat. <i>pōtus</i> :		...		

IV. *ā*-series :

	Strong/Normal grade	Lengthened grade	Weak grade	
			Reduced	Zero
	<i>ā</i> :	...	<i>a</i>	×
(i) IE. <i>*sthā</i> :	?	...	<i>*sthā-</i>	<i>*sth</i>
OIA. <i>tiṣṭhāmi</i> :		...	OIA. <i>sthitaḥ</i>	: <i>savyeṣṭhā</i> (warrior)
Gk. <i>histāmi</i> :			Gk. <i>statos</i>	:
<i>histēmi</i> :			<i>histamen</i>	:
(ii) IE. <i>*āg</i> (to drive) :	?	...	<i>*əg-</i>	<i>*-g-</i>
OIA. <i>ājih</i> (race) :		...	OIA.	: <i>jmán</i> (vedic)
Gk. <i>stratēgos</i> , :				(path)
<i>agōgē</i> :				
Lat. <i>ambāges</i> :				
cf. Goth. <i>faran</i> :	<i>fōr</i>		cf. Goth. <i>farans</i> :	
: <i>fōram</i>				
(iii) IE <i>*bhā</i> (to speak) :	?	...	<i>*bhā</i>	<i>*bh</i>
OIA. <i>bhā-mati</i> :				
<i>bhāna</i> :			Gk. <i>phamē</i>	:
Gk. <i>phāmi</i> :			<i>phatōs</i>	:
<i>phēmi</i> :			Lat. <i>fateor</i>	:
Lat. <i>fari</i>				

§8. *Varieties of Ablaut series*

There are sub-varieties of ablaut series. These varieties are in accordance with the treatment of radical vowels being preceded or followed by semi-vowels, nasals and liquids. The *e*-series may be preceded or followed by semi-vowels, nasals and liquids, but the other series (*ē*, *ō*, *ā*) can be followed or preceded by semi-vowels. These sub-varieties are enumerated below :

1. Sub-varieties of *e*-series :

	Strong	Lengthened	Weak reduced	zero
A.	=	<i>e</i> : <i>o</i>	<i>ə</i>	: <i>×</i>
B.	<i>i</i>	<i>ei</i> (<i>iē</i>) : <i>oi</i> (<i>io</i>)	<i>ēi</i> (<i>iē</i>) : <i>ōi</i> (<i>iō</i>)	<i>ī</i> : <i>ī</i> (<i>i</i>)
C.	<i>u</i>	<i>eu</i> (<i>ue</i>) : <i>ou</i> (<i>uo</i>)	<i>ēu</i> (<i>uē</i>) : <i>ōu</i> (<i>uō</i>)	<i>ū</i> : <i>ū</i> (<i>u</i>)
D.	<i>m</i>	<i>em</i> (<i>me</i>) : <i>om</i> (<i>mo</i>)	<i>ēm</i> (<i>mē</i>) : <i>ōm</i> (<i>mō</i>)	<i>əm</i> (<i>mə</i>) : <i>m</i> (<i>m</i>)
E.	<i>n</i>	<i>en</i> (<i>ne</i>) : <i>on</i> (<i>no</i>)	<i>ēn</i> (<i>nē</i>) : <i>ōn</i> (<i>nō</i>)	<i>ən</i> (<i>nə</i>) : <i>n</i> (<i>n</i>)
F.	<i>r</i>	<i>er</i> (<i>re</i>) : <i>or</i> (<i>ro</i>)	<i>ēr</i> (<i>rē</i>) : <i>ōr</i> (<i>rō</i>)	<i>ər</i> (<i>rə</i>) : <i>r</i> (<i>r</i>)
G.	<i>l</i>	<i>el</i> (<i>le</i>) : <i>ol</i> (<i>lo</i>)	<i>ēl</i> (<i>lē</i>) : <i>ōl</i> (<i>lō</i>)	<i>əl</i> (<i>lə</i>) : <i>l</i> (<i>l</i>)

"When *e* was lost before (or after) *i*, *u*, *m*, *n*, *r*, *l* these semi-vowels, nasals and liquids remained consonant before vowels, but became sonant before consonants. Concerning *ī*, *ū*, *əm*, *ən*, *ər*, *əl* must be observed, that they occur not only as *ə*-degree of *ei*, *eu*, *em*, *en*, *er*, *el*, but also as weakest degree of *eīe*, *eue*, *eme*, *ene*, *ere*, *ele* : Bartholomae is of opinion, that *ī* and *ū* are contractions of *ə* + *i* and *ə* + *u* and stand on a level with *əm*, *ən*, *ər*, *əl*." [SPH., p. 11]

Examples of varieties of e-series with semivowels i

A. Strong e : o	Lengthened ē : ō	Weak ə : x
B. (i) *iē : *iō	*iē : *iō	*i : x
IE *iēg̃ : iōg̃ OIA. yájate	*iēg̃ : *iōg̃ OIA. yājayati	*iġ : x OIA. iṣṭa (< yaj + ta)
(ii) IE *ei : *oi OIA. eti	*ēi : *ōi OIA. āyana	*i : x OIA. ita :
C. (i) *eu : *ou IE *bheu : *bhōu OIA. bhavati	*ēu : *ōu *bhēu : *bhōu OIA. bhāvayati	*ū : x *bhū : OIA. abhūvan: OIA. bhūta :
(ii) *ue : *uo IE *suep : *suop OIA. svapiti OIA. svapna	*uē : *uō *suep : *suop. OIA. su-svāpa OIA. svāpa	ū : u(u) : *sup OIA.: supta supti

Examples of varieties of e-series with nasals and liquids :

<i>Strong</i>	<i>Lengthened</i>	<i>Weak</i>
D. (i) *en : *on IE *men : *mon OIA. manyate OIA. manas	*ēn : *ōn IE *mēn : *mōn OIA. māna	*ən : *n(ṇ) *mən : *n(ṇ) OIA. : mata (< *mṇta)
(ii) *ne : *no	*nē : *nō	*ən : *n(ṇ)
E. (i) IE *em : *om (ii) *me : *mo	*ēm : *ōm *mē : *mō	*əm : *m(ṇ) mə : *m(ṇ)
F. (i) *er : *or IE *bher : *bhor OIA. bibharti	*ēr : *ōr *bhēr : *bhōr OIA. abhārsam (*e-bhersm̐)	*ər : *r(ṛ) : *bhr OIA. bibhrati (< *bibhrṇti) OIA. bhṛtaḥ
(ii) *re : *ro	*rē : *rō	*ər : *r(ṛ)
G. (i) *el : *ol	*ēl : *ōl	*əl : *l(l)
(ii) *le : *lo	*lē : *lō	*əl : *l(l)

II. Varieties of ē-series :

A	-	Strong	Lengthened	Weak
		ē : ō	×	ə(e) : nil
B	(ī)	ēī(īē) : ōī(īō)	...	ī, eī(īe) : ī(i),
C	(ū)	ēū(ūē) : ōū(ūō)	...	ū, eū(ue) : ū(u).

"The relation of \dot{i}, \dot{u} , to i, u in $\bar{e}\dot{i}(\dot{i}\bar{e})$ and $\bar{e}\dot{u}(\dot{u}\bar{e})$ roots is the same as in $e\dot{i}(\dot{i}e)$ and $e\dot{u}(\dot{u}e)$ roots : we find \dot{i}, \dot{u} before vowels and i, u before consonants." [SPh., p. 12].

Examples,

	Strong	Lengthened	Weak
B. (ī)	(i) $\bar{e}\dot{i} : \bar{o}\dot{i}$	...	$\bar{i}, e\dot{i} : \dot{i}(i)$
	IE * $\bar{n}\bar{e}\dot{i} : *n\bar{o}\dot{i}$	...	$n\bar{i} :$
	OIA. $\bar{n}\bar{a}y\bar{a}y\bar{a}mi$	...	OIA. : $ninye$: $ninima$ (vedic) $n\bar{i}ta-$:
	(ii) $\dot{i}\bar{e} : \dot{i}\bar{o}$	...	$\bar{i}, \dot{i}e : \dot{i}(i)$
C. (ū)	(i) $\bar{e}\dot{u} : \bar{o}\dot{u}$	...	$\bar{u}(e\dot{u}) : \dot{u}(u)$
	(ii) $\dot{u}\bar{e} : \dot{u}\bar{o}$	...	$\bar{u}(ue) : \dot{u}(u)$
	IE * $\bar{s}\dot{u}\bar{e}p : s\dot{u}\bar{o}p$...	
	OIA. $\bar{s}v\bar{a}pa$	...	OIA. : $\bar{s}upta$ $\bar{s}upti$

III. Varieties of *ō*-series :

	Strong	Lengthened	Weak
A =	<i>ō</i>	×	<i>ə(o)</i> : nil
B (<i>i</i>)	<i>ōi</i> :	...	<i>ī(oī)</i> : <i>i(i)</i>
C (<i>u</i>)	<i>ōu</i> :	...	<i>ū(ou)</i> : <i>u(u)</i>

“The relation of *i*, *u* to *i*, *u* in the weakest degree of roots with *i*, *u* is the same as in the *e*-, *ē*-, and *ā*-series.” [S.Ph. p. 12]

Examples,

	Strong	Lengthened	Weak
B. <i>i</i>	<i>ōi</i> : ? IE * <i>nōi</i> OIA. <i>nāyayāmi</i>	...	<i>ī(oī)</i> : <i>i(i)</i> OIA. : <i>ninye</i> OIA. : <i>ninima</i> (vedic) OIA. <i>nīta</i> -:
C. <i>u</i>	<i>ōu</i> : ? IE * <i>dōu</i> OIA. <i>dāváyāmi</i>	...	<i>ū(ou)</i> : <i>u(u)</i> OIA. : <i>dunomi</i> OIA. <i>dūna</i> -s : OIA. <i>davas</i> :

IV. Varieties of *ā*-series :

A =	Strong <i>ā</i> : <i>ō</i>	Lengthened ×	Weak <i>ə(a)</i> : <i>i(i)</i>
B (<i>i</i>)	<i>āi(iā)</i> : <i>ōi(iō)</i>	×	<i>ī, ai(iā)</i> : <i>i(i)</i>
C (<i>u</i>)	<i>āu(uā)</i> : <i>ōu(uō)</i>	×	<i>ū, au(uā)</i> : <i>u(u)</i>

“Concerning the roots with *i, y* we must observe, that the mutual relation of *i, y* and *i, u* in the weakest degree is the same as in the *e-* and *ē-series*.” [S.Ph. p. 12]

Examples :

	Strong	Lengthened	Weak
B. (<i>i</i>)	(i) $\bar{a}i : \bar{o}i$ IE $*nāi : *nōi$ OIA. $nāyāyāmi$	...	$\bar{a}(a) : nil$ OIA. : $ninye$ OIA. : $ninima$ (vedic) OIA. $nītas$:
	(ii) $iā : iō$	...	$\bar{a}(a) : nil$
C. (<i>y</i>)	(i) $\bar{ā}y : \bar{ō}y$ IE $*dāy : dōy$ OIA. $dāvāyāmi$	...	$\bar{u}(ay) : y(u)$ OIA. : $dunomi$ $dūnās$: OIA. $davas$ (fire) :
	(ii) $yā : yō$	...	$\bar{u}(ya) : y(u)$

§9. IE Ablaut in Sanskrit

The IE ablaut is also represented in Sanskrit and the Sanskrit grammarians have pointed out this IE ablaut by the three terms : *guṇa*, *vr̥ddhi* and *samprasāraṇa*.

guṇa is the normal or strong grade, *vr̥ddhi* is the lengthened grade and *samprasāraṇa* is the weak-grade of those roots in which the radical vowel is followed or preceded by semi-vowels (i.e. *e-series* followed or preceded by semi-vowels *i, y*).

There is a little difference between the two processes. Sanskrit grammarians consider the weak-grade as the original and point out the other two steps as successive strengthenings.

The linguists, on the other hand, consider the strong-grade as the original and take one step downwards for weakening, and one step upwards for strengthening. That is to say, Sanskrit grammarians look upon *i, u, ṛ, ḷ* as the basic vowels, which are strengthened under certain circumstances (when followed or preceded by *a*), and the linguists take \tilde{e} , \tilde{o} , \tilde{a} as the basic vowels, and the weak-grade is the reduction of these basic vowels.

In certain cases the *i, u, ṛ, ḷ* are the vowels, e.g. *vivāha* > *vāivāhika*, *urṇabābha* > *āurṇabābha*, *kṛ* > *karaṇa*, *kāraṇa*, *kḷp* > *kalpanā*, *kālpanika*, but in almost all cases, they are the weak-grade of *e, o, ar, al*. From the forms OIA. *pātāmi* (Gk. *pétomai*), *āpāti* and *āpaptam*, it will be clear that Gk. *e* corresponds to OIA *a* and this shows what is called *e* or full grade ablaut. The *apāti* form shows the lengthened grade, and where the vowel *e* or *a* is lost, this is the weak grade or zero grade.

So the arrangement of the Sanskrit *guṇa-vṛddhi* phenomenon in accordance with the IE ablaut system *vis-à-vis* Sanskrit vowels, is given below :

guṇa	vṛddhi	samprasāraṇa	
		secondary accent	accentless
a	ā	i	—
		ī	i, y (—i + a)
		ū	u, v (—u + a)
		ṛ, ḷ	r (—ṛ + a) l (—ḷ + a)
e	āi		
o	āu		
adeṇ guṇaḥ	vṛddhir ādāic	ig yaṇaḥ samprasāraṇam	
(Pā. I. 1.2)	(Pā. I. 1.1)	(Pā. I. 1.45)	

The IE four series of ablaut (*e-*, *ē-*, *ō-* and *ā-*series) are reduced to two series of ablaut in OIA : *a*-series and *ā*-series. As the IE **e* and **o* become *a* in OIA, the IE *e*-series has become *a*-series in OIA. In a similar way, IE **ē-* **ō-* and *ā*-series are also reduced to *ā*-series in OIA, because IE *ē*, *ō*, *ā* become *ā* in OIA. The weak grade of IE can only be compared with the *samprasāraṇa* of OIA when followed by semi-vowels, nasals and liquids. OIA. *ī*, *ū* would be the secondary accent grade of *samprasāraṇa* or weak-grade, whereas its shortened, *i*, *u*, would be the accentless form of the weak-grade, i.e., zero-grade. For example, *vah + ta = ūdha* would be the secondary accent grade, whereas *vac + ta = ukta* is an accentless grade. Both the series have some varieties when followed by semi-vowels, nasals and liquids, and these are shown below :

- A. *a*-series (= *guṇa* series) : 1. *a*, 2. *e* (*ay*), 3. *o* (*av*),
4. *ar*, 5. *al*, 6. *an*, 7. *am*
B. *ā*-series (*vr̥ddhi* series) : 1. *ā*, 2. *āi* (*āy*), 3. *āu* (*āv*).

In the strong (*guṇa*) grade the vowel is properly accented, in the lengthened (*vr̥ddhi*) grade the vowels become long and it may or may not bear the original accent, and in the weak-grade the vowel is reduced or lost, and the reduced vowel is always accentless.

When the original vowel is long, the lengthened grade will be absent.

The OIA *guṇa-vr̥ddhi* or ablaut phenomenon has become a grammatical device in Old Indo-Aryan. Though its beginning can be traced from Indo-Iranian, it has developed fully in OIA. Sometimes by ablaut change in the radical or stem vowel, a word can change its parts of speech, e.g., *śivā(n)* : *śāiva* (adj.) Some of such instances of ablaut may go back to IE, but there are many examples like *śiva-saiva*, *śisū-śaiśava*, which are of Indo-Aryan origin. Herein we find an extension of IE ablaut.

Below are given the examples of OIA *a*- and *ā*- series of ablaut as they are evolved in OIA from IE together with the combination of semi-vowels, liquids and nasals.

I. Examples of OIA a-series :

IE grades	Strong	Lengthened	cf. weak
Skt. grades	guṇa	vṛddhi	samprasāraṇa if followed or preceded by semi-vowels, liquids, nasals
	normal accent	may or may not bear the normal accent	secondary accent
IE e-series	e : o	ē : ō	reduced
I. OIA. a-series	a	ā	zero
1. a : pat :	patati	pātayati, apāti	pītsati
: pad :	padam	(vyāghra)-pāt	pīdamāna (firmly standing)
2. e(ay)	e(ay)	āi(=āy)	ī
i	eti	āit, āyan (pl.)	(i)y
ci	saṃcaya	cāyayati	imāḥ (pl.)
div (play)	devīṣyati. dīdeva		yanti (pl.)
nī	neṣyati, netā	anāṣīt, nāyaka	saṃcīta
bhid	bibheda	abhātsit	didivuh
			bhiddyate

IE grades	Strong	Lengthened	cf. weak
Skt. grades			<i>samprasāraṇa</i> if followed or preceded by semi-vowels, liquids, nasals
	normal accent	may or may not bear the normal accent	secondary accent
3. o(av)	o(av)	āu(āv)	reduced
budh	bodhati	bāuddha	zero
bhū	bhavati	bhāvayati, bhāva	u(v) buddha
śru	śroṣyati, śrotā, śravah	śrāvayati, śrāvaka	prabhuh, a-bhva (terrible)
4. ar	ar	ār	śrutah
bhr	bharati	babhāra, bhāra	ī, r bhṛta
mrj	marjayanti marjya	māṛjayati, māṛjana	mṛkṣatama mṛaṣṭa
ti	tarati	tārayati, atārṣṭ	tiranti, tīryati (ut)-tirna, tīrṣuh, turati (vedic) tūtūrṣati (vedic)

IE grades	Strong	Lengthened	cf. weak
Skt. grades			
	<i>guṇa</i>	<i>vr̥ddhi</i>	<i>samprasāraṇa</i>
	normal accent	may or may not bear the normal accent	if followed or preceded by semi-vowels, liquids, nasals
			secondary accent
			reduced
5. <i>al</i>	<i>al</i>	<i>āl</i>	zero
<i>kḷp</i>	<i>kalpate, kalpanā</i>	<i>kālpanika</i>	<i>ḷ, ḷ</i>
6. <i>an</i>	<i>an</i>	<i>ān</i>	<i>kḷpyate</i>
<i>han</i>	<i>hanti, hanīsyati</i>	<i>jaghāna, hāni, ghātaka</i>	<i>n(a)</i>
7. <i>am</i>	<i>am</i>	<i>ām</i>	<i>ghnanti, hataḥ</i>
<i>gam</i>	<i>gamiṣyati</i>	<i>jagāma</i>	<i>m(a)</i>
<i>tam</i>	<i>atamaḥ</i>	<i>tāmraḥ</i>	<i>jagmuḥ, gataḥ</i>
			<i>timiraḥ</i>

II. Examples of OIA ā-series (< IE *ē, *ō, *ā) :

IE grades	Strong	Lengthened	cf. weak
<i>Skt., grades</i>	<i>guṇa</i>	<i>vrddhi</i>	<i>samprasāraṇa</i> if followed or preceded by semi-vowels, liquids, nasals
	normal accent	may or may not bear the normal accent	secondary accent
1. <i>ā</i>	<i>ā</i>	...	reduced
<i>dā</i>	<i>dadāti</i>		<i>ī(a)</i>
<i>sthā</i>	<i>tiṣṭhāmi, sthātum</i>		<i>dīta, datte</i>
2. <i>āy</i>	<i>āy(āi)</i>	...	<i>sthita</i>
<i>gāi</i>	<i>gāyati</i>		<i>ay(e), ī</i>
<i>dhāi</i>	<i>dhāyati</i>		<i>geyāt, giyate</i> <i>gītā</i>
3. <i>āv</i>	<i>āv(āu)</i>	...	<i>stāhādhaya,</i> <i>dhenu, dhitrivā</i>
<i>gāu</i>	<i>gāvah, gāuh</i>		<i>av(o), ū</i>
			<i>gomat,</i> <i>pungavaḥ</i>
			<i>dhinoti < dhā,</i> <i>dhi, or dhe</i> <i>v, u</i> <i>dvigah</i>

§10. Importance of ablaut

Ablaut is a morphophonemic device for the formation of a word from a root or a noun by adding suffixes to it. Hence the application of ablaut is found in the morphology of a grammar. Ablaut is noticed in the primary (*kṛt*) and secondary (*taddhita*) suffixes, e.g., *i-* (go) > *áy-ana* (course), *hū* (call) > *havana* (invocation), *du* (burn) > *dāva* (fire), *nī* (lead) > *nāyaka* (leader); *marut* > *māruta* (relating to the Maruts), *pṛthivī* > *pārthiva* (earthly), *tri* (three) > *traya* (threefold), *div* (heaven) > *deva* (divine).

The declensional pattern of OIA is often regulated by ablaut, e.g., *pitṛ* > *pitaram*, *pitṛā*, *agniḥ* > *agneḥ*, *sādhuh* > *sādhoh* etc.

The verbal system is largely regulated by ablaut, and sometimes the *gaṇas* are also determined by that; e.g., *budh* : *bódhati* and *budhāti*.

Sometimes the aspectual difference is shown by ablaut; i.e., *e* is used for the imperfective and *o* for the perfective. This is very much clear in Greek; e.g., *leipo* (imperfective) : *leloipa* (perfective).

Ablaut is responsible for the breaking up of a primitive single root into a syllable. The primitive IE root was generally disyllabic, e.g., **enek* > **enĕ* > *ĕnĕ* : *nĕnĕ* > *nĕnĕ*. From **enĕ* OIA. *aṁś* (*aṁśati*) and from *nĕnĕ* > OIA, *aś* (*aśnāti*). From **nĕnĕ* > OIA *naś* (*naśyate*).

At times, accent is determined by ablaut. When the accent is lost (as *pt* in *apaptan*) in the weak-grade, it helps to know the accent in the normal/strong grade which is *pátāmi* (Gk. *pétomai*). In fact, loss of accent in the weak-grade also tells us that there was a stress accent in the primitive IE.

Ablaut is also necessary to change the parts of speech of a word; e.g., *śiva* (noun) > *śaiva* (adjective), *vivāha* (n.) > *vaiivāhika* (adj.), etc.

The Sanskrit grammar is terribly inundated with the ablaut phenomenon for the formation of a word from a root or from another word.

CHAPTER FIVE

Syntagmatic Phenomena (Behaviour of Sounds)

[Phonetic Laws and Phonetic Tendencies]

The sounds of a language do not always remain constant throughout its history. They undergo changes or modifications in some way or other. The causes of this change may be many (accent, analogy, economy of effort, etc.), but the behaviour of sound change is mainly of two types: sound changes which are regular, and ultimately lead to a phonetic law, and changes which, though not regular, but tend to be regular in a particular direction, popularly termed as syntagmatic phonetic tendencies.

I. Phonetic Laws

When the change of a sound or a phoneme corresponds regularly to its cognate groups of language, that change may be regarded as constituting a phonetic law. Brugmann (*Morphologische Untersuchungen*, Leipzig, 1878-1910) says, "All sound-change, in so far as it proceeds mechanically, takes place in accordance with laws which know no exceptions" ("*nach ausnahmslosen gesetzen*"). At a later time, a phonetic law is defined as "a factual statement of a regular correspondence or set of correspondences found by empirical observation and comparison to exist, under like circumstances or conditions, between a given phoneme within a given area at a given period in the history of a given language-group, language, or dialect and a parallel phoneme (or parallel absence of phoneme) at another period or at different periods within such group, language, or dialect, or in different members of the language-group, whether at the same period or at different periods." [FL, p. 75 f.]

Some of the phonetic laws discovered by some scholars are applied to the Old Indo-Aryan language, and they are described below :

Grimm's Law

By Grimm's Law we understand the statement of the regular pattern of consonant correspondences presumed to represent changes from Indo-European to Germanic languages as enunciated and propagated by Jacob Grimm (1785-1863) in his *Deutsche Grammatik* between 1819 and 1822.

The Dane scholar Rasmus Kristian Rask (1787-1832) was the real discoverer of this law. He published the results of his investigations in 1818 and they were adopted and elaborated by Grimm in the second edition of his *Deutsche Grammatik* in 1822. In the first edition published in 1819, Grimm did not say much on phonology.

This law refers to the sound changes in Germanic languages which took place at two distinct periods. The first occurred in prehistoric times, called the first sound-shifting, and the second occurred about the 7th century. A.D. called the second-sound shifting and differentiated the High German from the Low German.

§1. Statement of Grimm's Law

I. If the same roots or the same words exist in Sanskrit, Greek, Latin, Celtic, Slavonic, Lithuanian, Gothic (Low German), and Old High German, then, wherever Sanskrit or Greek has an *aspirate* the Gothic has the corresponding *deaspirated* sound. That is to say,

I. IE voiced aspirated stops (*bh*, *dh*, *gh*) became the corresponding voiced spirants (*ḅ*, *ḥ*, *γ*) in Germanic and then *b*, *d*, *g* ; e.g.,

**bh* > *ḅ* (pronounced as Mod.E *v*. In Gothic pronounced *ḅ* but spelled *b*).

IE **nebhos* > OIA. *nābhas*, Gk. *nephelē*, Lat. *nebula*, Goth. **nibls*, ŌS. *neḅal*, OHG. *nebul*, OE. *nifol* (dark).

IE **bherō* > OIA. *bharāmi*, Gk. *pherō*, Eng. *bear*.

IE **bheṃō* > OIA. *bhavāmi*, Gk. *phuō*, Goth. *bēon*, OHG. *bin*, Eng. *be*.

**dh* > *ð* > OE. *d*, (= mod E. *th* in *then*. In Gothic pronounced *þ* but spelled *d*)

IE **roudhos* > OIA. *rudhirás*, Goth. *rauþs*, ON. *rauðr*, OE. *rēad*, Eg. *red*.

**gh* > *γ* (= mod. HG. *sagen*. In Gothic pronounced *γ*, but spelled *g*)

IE **ghóstis* > Lat. *hostis*, Goth. *gasts*, OE. *giest* (strange), Eng. *guest*.

II. If in Sanskrit, Greek, Latin, etc., we find a voiced non-aspirate stop, then we see a corresponding voiceless non-aspirate stop in Low German, and a corresponding aspirate in High German. That is to say,

II. The voiced non-aspirate stops (*b*, *d*, *g*) became the corresponding voiceless non-aspirate stops (*p*, *t*, *k*), e.g.

b > *p*.

Lith. *dubūs*, Goth. *diups*, OE. *dēop*, Eng. *deep*.

Old Bulgarian *slabŭ*, (slack), Goth. *slēpan*, OE. *slāpan* (sleep)

d > *t*,

IE **dek̑m̑* > OIA. *daśa*, Gk. *deka*, Lat. *decem*, Goth. *taihun*, OHG. *zehan*, OE. *tien*, Eng. *ten*.

IE **duō* > OIA. *dvā*, Gk. *duō*, Lat. *duo*, Eng. *two*.

g > *k*,

IE **agros* > OIA. *ajras*, Lat. *ager*, Gk. *agros*, Goth. *akrs*, OE. *æcer* (field).

IE **gōnu* > OIA. *jānu*, Gk. *gonu*, Lat. *genu*, Goth. *kniu*, OHG. *kneo*, OE. *cnēo*, Eng. *knee*.

III. If Sanskrit, Greek, Latin etc. have voiceless stops, the Gothic presents the corresponding aspirates, and Old High German the corresponding voiced stops. That is to say,

III. IE voiceless stops (*p*, *t*, *k*) became the corresponding voiceless spirants (*f*, *þ*, *h* (= *χ*), e.g.,

p > *f*

IE **pēdos* > OIA. *pādaḥ*, Gk. *pēdos*, Lat. *pēs*, Goth. *fōtus*, OHG. *fuoz*, Eng. *feet*.

IE **p̥tēr* > OIA. *pitā*, Gk. *patēr*, Lat. *pater*, Goth. *fadar*, OHG. *vater*, Eng. *father*.

IE **peḱu* > OIA. *paśu*, Lat. *pecu*, Goth. *faihu* OE. *feoh* (cattle, money), Eng. *fee*.

Lat. *piscis*, OE. *fisc*, Eng. *fish*

t > *ḥ*

OIA. *tvam*, Lat. *tu*, OE. *ṭū*, Eng. *thou*, OHG. *dū*

OIA. *trayaḥ*, Lat. *trēs*, OE. *ṭrī*, Eng. *three*.

k > *h* (= *χ*)

Lat. *cor* (gen. *cordis*), OE. *heorte*, Eng. *heart*.

OIA. *śatam*, Lat. *centum*, OE. *hund*, Eng. *hundred*.

OIA. *kaḥ*, Gk. *pos*, Lat. *quis*, Goth. *hwas*, OHG. *hwēr*, Eng. *who*.

§2. Exceptions to Grimm's Law

Though Grimm has done a good deal of phonetic law, his law carries many exceptions some of which are mentioned below :

- (1) onomatopoeic and imitative words ;
- (2) borrowed words,
- (3) irregular sound-change (cf. OIA. *aham* – Gk. *egōn*, OIA. *hrid* – Gk. *krid*, Eng. *heart*).
- (4) *sk* (*sc*), *st*, *sp*, where the *k*, *t* and *p* are preserved by the preceding *s*, cf. Lat. *scindo*, Goth. *skaida*, Eng. *shed*, (here *sh* comes) ; Lat. *stella*, Goth. *stairnō*, Eng. *star*.
- (5) Final *t* is preserved by a preceding guttural (i.e. in a *kt*, *pt* combination) ; cf. Lat. *octo*, Goth. *ahtau*, Eng. *eight* (OE. *eahta*) ; Lat. *nox* (*noctis*), Eng. *night*, OE. *neaht*.
- (6) Final *t* is *d* (instead of *th*) after *n* ; cf. Lat. *centum*, Eng. *hundred*, cf. particles in *-ont* (Greek), *-ant* (Lat), *end*, *-ana* (OE.)
- (7) **tt* became *tht* in Gothic and later *ss*. As OIA. *vitta*, Goth. *wissa*.

§3. Value of Grimm's Law

There cannot be any exact etymological investigation without Grimm's law, and consequently no linguistic science. Before this law was established, there was guess-work in comparative philology. This law shows us what forms in cognate languages are exactly expected. The knowledge of this law tells us how words are connected with each other in the kindred tongues, and it prevents us from blundering into any wrong equation of words.

By this law we can recover the older or lost forms in cognate dialects. This law has established the relation of OIA. *śvan-* (dog) = Lith. *šuõ* = Gk. *kũõn* = Lat. *canis* = Germ. *Hund* = Eng. *hound*.

Grassmann's Law

By Grassmann's Law, we understand an observation made by Hermann Grassmann (1809-77) in 1862 that when two aspirated consonants occurred in successive syllables in Sanskrit and Classical Greek, one, usually the first, was deaspirated, becoming a voiced stop in Sanskrit and a voiceless stop in Greek. (This law can be compared with Pāṇini's sūtra *jhalām jaś jhaśi* (VIII. 4. 53) and *abhyāse car ca* (VIII. 4. 54) which describe the same thing in case of Sanskrit). For example,

IE **bhendh* > OIA. *bandh*, Gk. *penh*

IE **bheudh* > OIA. *bodh*, *budh*, Gk. *peuth*

IE. **bhebhũ* > OIA. *babhũva*, Gk. *pephũka*

IE **dhedhẽmi* > OIA. *dadhãmi*, Gk. *tithẽmi*

Grassman's law is a sort of dissimilation and an exception to Grimm's Law. Thus OIA. *bodhati* and Gothic *biudan* and Old High German *bēotun* (to bid) are clearly connected to each other, but the initial *b* sound in OIA and Gothic though puzzling, was solved by this law. Fully conversant with Sanskrit and Greek, Grassmann has stated this ordinary rule which holds good for these two languages. If in Sanskrit and Greek two consecutive syllables are aspirated the first becomes deaspirated. We get such examples in OIA. as *dadhãmi*,

babhūva, corresponding to Greek *tithēmi*, *pēphūka*. Grassmann compared the Greek and Sanskrit forms together and though the initials were different, this very fact gave the clue.

With the help of this law, we can reconcile the phonetic correspondences between Sanskrit and Greek *b* and *p*, and *d* and *t* which postulate that both go back to the same IE aspirates **bh* and **dh*. In Greek these voiced aspirates, represented by the voiceless *ph* and *th* would give immediately by Grassmann's Law as *p* and *t* and in Sanskrit as *b* and *d*; and also the initial *b* and *d* in Gothic would follow from Grimm's Law.

In OIA Grassmann's law is operative in reduplicating verbal bases; e.g., *khan* (dig) > *cakhāna*, *kyā* (tell) > *cakhyāu*, *khād* (eat) > *cakhāda*, (g)*han* (kill) > *jaghāna*; *chand* (please) > *cacchanda*, *ḍhāuk* (go, approach) > *ḍuḍhāuke*, *sthā* (stay) > *tiṣṭhati*, *dhāv* (run) > *dadhāva*, *dhū* (shake) > *dudhāva*, *dhmā* (blow) > *dadhmāu*, *dhyāi* (think) > *dadhyāu*, *phal* (result) > *paphāla*, *phulla* (bloom) > *puphulla*, *bhā* (shine) > *babhāu*, *bhāṣ* (speak) > *babhāṣe* etc.

In Greek also this is operative in the reduplicating verbal bases; e.g., *khainō* (to yawn, gape) > *kékhena*, *khatrō* (to rejoice) > *kekharēka* (glad), *khartzomai* (to show favour) > *kekharismai*, *thallō* (to bloom) > *téthēla*, *thnēskō* (to die) > *téthnēka* (dead), *thuō* (to offer) > *téthuka*, *phainō* (show) > *péphañka*, *pheugō* (flee) > *pépheuga*, *phēmi* (speak) > *péphasmai* (pf. pass. 1st sg.), etc.

Verner's Law

By Verner's Law we generally understand the statement made by Karl Verner (1846-96) in 1875 of a regularity behind some apparent exceptions to Grimm's law in the Germanic languages. Verner states that the Proto-Germanic non-initial, voiceless fricatives became voiced, if the immediately following vowel was accented in Proto-Indo-European.

Verner's Law is an important supplementary to Grimm's Law. Verner has pointed out that the operation of the law

of sound-shifting depends on the position of accent, i.e., the original **p*, **t*, **k* are changed in Gothic as *þ*, *ð*, *γ* in accordance with Grimm's Law if the accent precedes, but if the accent is on the vowel following the shift is a double one, i.e., to *b*, *d*, *g*. That is to say,

I. IE *p*, *t*, *k* medially or finally, did not always develop into *f*, *þ*, *h* by Grimm's law, but as *þ*, *ð*, *γ* (OE. *f* (i.e. *v*), *d*, *g*), when the vowel next preceding them did not bear the principal accent of a word. These irregularities are due to the IE and PGerm. accent system, and this is propounded by Verner, and so known as Verner's law. For example,

IE **kmtóm* > OIA. *śatám*, Gk. *he-katón*, Lat. *centum* > PGm. **χunðóm* (<older **χumðóm*) > Goth. OE. OS. *hund*, OHG. *hunt*.

IE **snekuros* > OIA. *śvaśuras*, Goth. *swaihra*, OHG. *swehur*.

IE **snekurá* > Gk. *hekurá*, OE. *sweger*, OHG. *swlgar* (mother-in-law).

IE **septn* > OIA. *saptá*, Gk. *heptá*, Lat. *septem*, Goth. *sibun*.

IE **dekṃ* > OIA. *daśa*, Gk. *déka*, Lat. *decem*, Goth. *tahun*, OS. *tehan* OHG. *zehan*, Eng. *ten*.

IE **pātér* > OIA. *pitár*, *pitá*, Gk. *patér* > PGm. **faðér* (<**faþér*), Goth. *fadar*, OE. *faeder*, OS. *fader*, OHG. *fater*, O. Icel. *faðir*.

IE **ētmón* > OIA. *āt má* > PGm. **ēðmèn* (<**ēþmèn*), OE. *āðom*, OHG. *atum*.

IE **qaitus* > OIA. *ketús* > PGm. **χaiðús* (<**χaiþú-s*) > Goth. *haidus*.

OIA. *vártana-m* > OE. *weorðan*, OHG. *werdan*.

OIA. *vártā-mi* (I turn) > PGm. **wérþō* > OE. *weorþe* (I become).

OIA. *va-várta* (has turned, pret. 3 sg.) > PGm. **wárþi* > OE. *wearþ*.

OIA. *va-vṛtimá* (pret. 1 pl.) > PGm. **wurðumi* > OE. **wurðum*,

OIA. *va-vṛtāná* (past part. med) > PGm. **wurðaná* > OE. *worden*

II. But if the accent follows, then

$f, \bar{f}, h, s > \bar{b}, \bar{d}, \gamma, z > \text{OE. } f, d, g, r$

Prim-Gmc.	(Later Prim) Gmc.	Gmc.	OE.
* <i>wurḥun</i>	* <i>wurḥun</i>	* <i>wurḥun</i>	<i>wurdon</i>
* <i>fluhun</i>	* <i>fluzun</i>	* <i>fluzun</i>	<i>flugon</i>
* <i>wāsun</i>	* <i>wazun</i>	* <i>wazun</i>	<i>wæron</i>

The working of Verner's law can be seen very well in the conjugation of strong (i.e. irregular) verbs in Germanic languages, e.g.,

(i) *friosan* (to freeze) and its past participle *gi-frovan*.

(ii) *kiosan* (to choose) „ „ „ „ *gi-koran*.

also in nouns, e.g.,

(iii) *wolf-* and *wulpa* (she-wolf).

(iv) *swehur* (father-in-law) and *swigar* (mother-in-law).

All these examples are from Old High German.

Collitz's Law of Palatalization

By Collitz's Law we understand the statement made by Hermann Collitz (1855-) for the palatalization of the IE velars and labio-velars under the influence of palatal vowels.

The law simply states that the old palatals are the resultants of the Indo-European palatals and the new palatals are the resultants of IE velars and labio-velars, when followed by palatal vowels. This phenomenon of palatalization of the IE velars and labio-velars in Indo-Iranian when followed by a palatal vowel was discovered by Hermann Collitz. Hence it is known as Collitz's law or Collitz's law of palatalization, or simply law of palatalization, e.g. ;

IE **kuḡis* > OIA. *śucih*.

IE **leugetai* > OIA. *rocate*, cf. Gk. *leukós*. Lat. *lucet*.

IE **auges* > OIA. *ojas*, Lat. *augeō*, Goth. *aukan*.

IE **dhrughes* > OIA. *druhas*, Av. *druj-*. OHG. *triogan*.

IE **penque* > OIA. *pañca*, Gk. *pente*, Lat. *quinque*, Goth. *fimf*.

IE **que* > OIA. *ca*, Gk. *te*, Phrygian *ke*, Lat. *que*, Old Irish *na-ch*, Old Bulgarian *če* (and).

IE **gueretai* > OIA. *jarate*, OHG. *quirid*.

IE **gwiuos* > OIA. *jivah*, OP. *jiva*, OChSl. *živü*, Lat. *vivos*, Goth. *gius*, Eng. *quick*.

IE **guhndhi* > OIA. *jahi*, OP. *jadiy*.

In OIA the change of velars into palatals, particularly in reduplication and when some primary suffixes are added to a root, will presuppose the existence of palatal vowels in IE (cf. Pā. *kuhoś cuḥ*. VI. 2. 62); e.g., *kr* > *cakāra*, *khan* > *cakhāna*, *gam* > *jagāma*, *han* (< **ghan*) > *jaghāna*. But when the palatals are changed into velars (cf. Pā. *ca-joh ku-ghin-nyatoḥ*, VII. 3. 52), this presupposes that originally in IE it was the velar or labio-velar sounds not followed by palatal vowels; e.g., *pac* + (*gh*) *a* (ñ) > *pāka*, *tyaj* + (*gh*) *a* (ñ) > *tyāga*.

The law of palatalization was first propagated by Graziadio Isaia Ascoli (1829-1907) in his *Corsi di Glottologia* in 1870. But he made some mistakes in the assumption of OIA *c* which helped others to clarify the point. Then Vilhelm Thomsen (1842-1927) was the first to utter the discovery of the 'law of palatals'. Then it was followed by a series of scholars, such as, Karl Verner, Esaias Tegnér in Lund, Ferdinand de Saussure, Hermann Collitz and Johannes Schmidt. Collitz has elaborated and propagated this law, and hence it is known as Collitz's law.

Fortunatov's Law

By Fortunatov's law we understand that law which was propagated by Phillip Fjodorovic Fortunatov (1848-1914), a Russian scholar. He has stated the following rule:

IE *r* + dental remained unchanged in the Aryan, but in the combination of *l* and a following dental the *l* disappeared and the dental was lingualized. For example,

r + dental remained unchanged

IE **qárto* > OIA. *kártāmi* (epic), Cl. *kṛntāmi*, Lith. *kertu*.

IE **uértō* > OIA. *vártāmi*, *varte*, Lat. *vertō*, Goth. *waírþa*.

IE **mérdō* > OIA. *márdāmi*, Lat. *mordēō* (= OIA. caus. *mardāyāmi*).

IE **ardhos* > OIA. *ardhaḥ*, Lith. *ardyti* (to separate).

l + dental = dental lingualized.

IE **palto-s* > OIA. *paṭa-s*, OChSl. *platino*, Russ. *polotnó* (linen),
cf. OIA. *paṭalam* (cover), Gk. (Thrac) *péltē* (a little
shield), Icel. *feldr* (cover).

IE **paltus* > OIA. *paṭus*, cf. Gk. *platús* (saltish, brack).

IE **uالتos* > OIA. *vaṭa-s* (*vaṭam*, *vaṭī*), cf. Lith. *valtis* (thread),
Russ. *volótl* (thread)

Bartholomae's Law

By Bartholomae's law we understand that law which was propagated by Christian Bartholomae (1855-1925), a German scholar. He has stated the following rule :

A consonant-group consisting of a voiced aspirate and a voiceless non-aspirate changes into a group of voiced non-aspirate and voiced aspirate.

This law is a kind of mutual metathesis and assimilation combined. This law is mainly operative in Indo-Aryan through the Indo-Iranian stage.

IIr. **dugh-ta* > PIA. **dud-gha* > OIA. *dugdha*.

IIr. **uz'h-ta* > PIA. **uz'-dha* > OIA. *ūḍha* (<**uḍḍha*).

IIr. **uaz'h-ta* > PIA. **vaz'-dha* > OIA. *vāḍha* (<**vaḍḍha*).

IIr. **ṭṇaz'h-ti* > PIA. **ṭṇaz'-dhi* > OIA. *ṭṇeḍhi* (<**ṭṇeḍḍhi*).

Sievers' Law

On the basis of Vedic and Germanic evidences Eduard Sievers (1850-1932) first enunciated a law in 1878 which later on came to be known as Sievers' Law. The law simply is—

"Unaccented *i* and *u* after a consonant and before a vowel were consonantal after a short syllable, vocalic after a long."

After its publication, the law has been criticized for the improvement of the law, and it is stated that this law also applies to the Iranian, Balto-Slavonic, Greek and Latin. Later on, after its corrections and improvements, this law has been enunciated by Franklin Edgerton (Lang. X. 1934, pp. 235-265) thus :

“After a consonant and before a vowel (i) if the preceding syllable is ‘light’ (prosodically short), that is, if the consonant is preceded by a short vowel (whether in the same word or not), the semivowel, is consonantal ; (ii) if the preceding is ‘heavy’ (prosodically long), that is, if the consonant is preceded by another consonant or a long vowel (whether in the same word or not), the semi-vowel is vocalic plus consonant. e.g.,

IE. **siēm* > RV. *syām*

IE. **sijēm* > RV. *siyām*

IE. **dyō* > RV. *dvā*.

IE. *duyō* > RV. *duvā*.

II. Phonetic Tendencies

The other types of grammatical change (*grammatischer wechsel*) are not regular, and therefore are not guided by any phonetic laws, but they occur in a language as a sort of syntagmatic phonetic tendencies.

When sounds or phonemes are uttered either in isolation or in combination, there is a possibility that some sorts of modifications or changes are possible in any of the sounds, or both of the sounds involved. These changes or modifications of sounds are of various types, and named variously depending on the nature of the modifications of sounds. Some of these phenomena have also affected the old Indo-Aryan language and they are described below :

Monophthongization :

When a diphthong is changed into a single sound (*mono* – one + *phthongas* – sound), the phenomenon is known as monophthongization. In a diphthong two sounds are uttered

simultaneously, but in a monophthong the two sounds are pronounced as one (=mono). In OIA. originally *e*, *o*, were diphthongs, as in Vedic *e* and *o* are sometimes pronounced as *ai* and *au*, but in Classical Sanskrit *e* and *o* were pronounced as monophthongs, as one sound, e.g.,

OIA. *śreṣṭha* < Vedic *śraiṣṭha*,

OIA. *āvocat* < Vedic *avaucat*

That *e* and *o* had the character of diphthong could be proved from the accounts given in the Prātiśākhya, and by Kātyāyana and Patañjali. The fact that *a+i* and *a+u* become *e* and *o* in Sandhi tells us that these two sounds will again be dissolved into diphthongs.

Diphthongization :

When one vowel i.e. monophthong is changed into two sounds, i.e. ; *di-phthongas* (=two sounds), the phenomenon is known as diphthongization. In OIA sometimes monophthongs *e* and *o* are pronounced as diphthongs ; e.g.,

Cl. Skt. *śreṣṭha* > Vedic *śraiṣṭha*,

avocat > Vedic *avaucat*

Hiatus :

When two vowels coming together, without any contraction or elision, are sounded separately as distinct from diphthongs, they are called Hiatus. As two vowels cannot stand in Sanskrit in two successive syllables, Hiatus is not regularly possible in Sanskrit. But in Vedic two instances are available : e.g., *tītaund*, *prauga*.

Compensatory Lengthening :

Compensatory lengthening means lengthening of a vowel as a result of compensation for the loss of a sound. In a conjunct consonant when consonant falls out of a word, the vowel preceding it is lengthened by way of compensation of the loss of a sound. Compensatory lengthening is a historical process which explains certain forms from the point of view of etymology. In OIA cases of compensatory lengthening

are noticed in some examples [cf. Pā. *ḍhra-lope pūrvasyā dīrgho'ṇah*. VI.3.111, and *ḍho ḍhe lopah*. VIII.3.13, *ro ri* VIII.3.14]; e.g.,

OIA. *vah + ta > *uḍh + ta > *uḍh + ḍha > ūḍha*

OIA. *muh + ta > *muḍh + ta > *muḍh + ḍha > mūḍha*

OIA. *prātaḥ + ramya > *prātar + ramya > prātāramya*.

OIA. *cakṣus + roga > *cakṣur + roga > cakṣūroga*.

OIA. *nī + aṅca > *ny + aṅca > nīca*.

IE **nisdos > Ilr. *nizdas > PIA *niḍḍas* (cf. Pāli and Pkt. *neḍḍa*)
 > OIA. *niḍaḥ*.

IE *pisdos > Ilr. *pizdas > PIA. *piḍḍas > OIA. pīḍaḥ*.

Assimilation :

Assimilation is the process by which one sound is harmonised with the other either by being identical with it, or by giving a common characteristics.

When two different consonantal sounds meet and cannot be easily pronounced together, one of them is modified to facilitate the pronunciation. Geiger is of opinion "that the consonants of lesser power of resistance are assimilated to those of greater resisting power" (§51) which in the language of Woolner is "between equals the second prevails, between unequals the stronger prevails."

Assimilation is of three types : progressive, regressive and mutual.

In the progressive assimilation, the previous sound assimilates, i.e. changes the following sound. In OIA, examples of this type of assimilation are not really available.

In the regressive assimilation, the following sound assimilates, i.e., changes the previous sound. This type of assimilation is found in OIA Sandhi. For example,

mahat + cakram > mahaccakram

tat + janya > tajjanya

sat + jana > sajjana

ut + ḍina > uḍḍina

ut + mukha > unmukha

In the mutual assimilation, both the sounds are changed to another sound. This is also found in OIA Sandhi. For example,

ut + śvāsah > ucchvāsah

tat + śarīram > taccharīram

mahān + śabdah > mahāñchabdah

Dissimilation :

When there is a recurrence of the same sound or of sounds which are formed in the same way, one of them is changed into a dissimilar sound. Grassmann's law is a sort of dissimilation.

Sometimes two similar sounds are instinctively avoided, by displacement or change of one of them. It can be both progressive and regressive like assimilation, For example,

badhra (Vedic)—for **bradhra*

nadbhyaḥ —from **nadbhyaḥ* (dat. pl. of *napāt*)

tiṣṭhati, tasthāu—from *sthā*,

caskanda —from *skand*.

Metathesis :

When two sounds interchange their place in a word, the change is called Metathesis. It is the transposition of sounds or phonemes in a word. For example,

Vedic *vamri* > Cl. Skt. *valmika*

OIA. *kareṇu* > OIA. *kaṇeru* (called Prakritism)

OIA. *hiṃsa + ac* > OIA. *siṃha*

cf. *bhaved varṇāgamād-dhaṃsaḥ siṃho varṇa-viparyayāt |*
gūḍhotmā varṇa-vikṣter varṇa-nāśāt pṛṣṭadaram ||

Anaptyxis :

When two or more consonants come together without a vowel between them, they form a conjunct. Normally they consist of two consonants, though a few of three consonants may be found in Sanskrit. In order to avoid the difficulty of

pronouncing a conjunct, a vowel can sometimes be inserted between the two members of a conjunct. The process is called Anaptyxis. The vowel thus inserted is usually *a*, *i*, and *u*. This is found when one member of the conjunct is a semivowel (e.g. *y*, *r*, *l*, *v*) or a nasal. For example,

Skt. *indra* > Vedic *indara*

Skt. *darśata* > Vedic *daraśata*

Skt. *puruṣa* < Vedic **purṣa*

Skt. *pariṣat* < Vedic *parṣat*

Skt. *manoratha* < Vedic **manoritha*

Skt. *dahara* < Vedic *dabhara* < Vedic **dabhra*

Prothesis :

For the simplicity of pronunciation, a vowel may be inserted at the beginning of a word. This is called Prothesis. This is found in Gk. in comparison with OIA and IE. For example,

IE **neun̥* > OIA. *nuva*, Gk. *ennea* Lat. *novem*,
Goth. *niun*

IE **regʷ-os* > OIA. *rajas*, Goth. *riqiz*, Greek. *erebos*.

IE **ner* > OIA. *n̥r*, Gk. *anēr*, Lat. *nerō*, Osc. *ner*-
Welsh. *ner*-

Epenthesis :

The word "Epenthesis" comes from the Greek "epenthesis" which means "an insertion", which again is derived from "epentithenai"; the word "epi" means 'upon', "en" means 'in' and "tithenai" means "to put, to place". Hence, in Grammar, epenthesis means the insertion of a sound or syllable in the middle of a word. "The epenthetic sound is often used to facilitate a difficult transition between two other adjacent sounds." (Pei). In OIA epenthesis is not available, but in Avestan it is found abundantly; e.g.,

OIA. *bharati* > Av. *baraiti*; OIA. *api* > Av. *aipi*.

OIA. *bhavati* > Av. *bavaiti*; OIA. *eti* > Av. *aēiti*.

OIA. *bhūri* > Av. *būiri*; OIA. *abhi* > Av. *aibi*.

Paragoge :

Paragoge (<Gk. *paragōgē* < *par* + *agesthai*, to be formed) is the addition of a sound or syllable to the end of a word ; e.g.,

OIA. *pāt* > *pāda* (foot).

OIA. *mās* (cf. *candramāh*) > *māsa* (month).

OIA. *yūṣ* > *yūṣa* (broth).

[Cf. Pā. *pad-dan-no-mās-hṛn-niś-asan-yūṣan-doṣan-yakañ-chakan-nudann-āsañ-chas-prabhṛtiṣu*. VI. 1.63.]

Aphaeresis/Apharesis :

Aphaeresis (<Gk. *aphairesis* lit. "taking off" <Gk. *apo*, 'away' + *hairein*, 'to take') is the loss of one or more sounds or syllables at the beginning of a word ; e.g.,

Skt. *apihitam* > *pihitam*

Skt. *apidhānam* > *pidhānam*

Skt. *avagāhya* > *vagāhya*

Skt. *avagāhaḥ* > *vagahaḥ*

Cf. *vaṣṭi Bhāgurir allopan avāpyor upasargayoḥ |*
āpañcaiva halantānām yathā vācā niśā diśā ||

Syncope :

Syncope (<Gk. *sunkopē* < *sun* + *koptein*, 'to cut off') is the loss of a medial sound, letter or syllable, resulting in a contraction of the word, i.e. when there is an accent on a particular syllable or sound, the unaccented vowel in the middle may disappear ; e.g.,

abhijānu > *abhijñu*

aguru > *agru*

suvarṇa > *svarṇa*

pugaphala > *pugphala* > *popphala* (Pkt.)

Apocope :

Apocope (<Gk. *apokopē*, lit. 'cutting off' < *apo* + *koptein*, 'to cut off') is the loss of one or more sounds or syllables at the end of a word ; e.g.,

OIA. *pāda* > *pāt* (in *vyāghrapāt*)

OIA. *māsa* > *mās* (cf. *candramāh*)

OIA. *nāsikā* > *nas*

OIA. *hṛdaya* > *hṛd*

OIA. *niśā* > *niś*.

Haplogy / Syllabic syncope :

Haplogy means the omission of one or two consecutive identical sounds or groups of sounds or syllables. In haplogy two consecutive syllables must be common.

In Greek, *haplos* means 'simple', 'single'. The word is derived from "ha" which represents IE **sm* and means together, one (cf. Skt. *sakṛt*, Av. *hakərət*) and *plos-os* fold and corresponds to Lat. *simplus*, *sim-plex*, "logy" is from "logia" derived from Gk. *logos* 'speech' and means here 'utterance'.

"The word haplogy was coined by Bloomfield to denote the elimination of a syllable which is identical, at least, in its initial consonant, with the next syllable in the same word."

"By the process called haplogy one of two identical or similar syllables in juxtaposition is dropped. Syllable is here to be taken in the sense not only of a consonant with a following vowel, but of a vowel with a following consonant." (VG. 64). For example,

OIA. *yādṛśasmin* > Vedic *yādṛśmin*

OIA. *mama + mat* > Vedic *mamat*

OIA. *nak-kṣatra* (lord of night) > *nakṣatra*

OIA. *pādodaka* > Vedic *pādoka*

OIA. *madhudhugha* (shedding sweetness) > *madhugha*
(name of a plant) > *madugha*

OIA. *prṣadudara* > *prṣodara*

OIA. *śevavṛdhah* (dear) > *śevṛdha*

OIA. *śaṣpa-piñjara* > *śaṣpiñjara* (tawny like young grass)

Jespersen offers an explanation for haplogy thus :

"This is haplogy, by which one sound or one group of sounds is pronounced once only instead of twice, the hearer taking it through a kind of acoustic delusion as belonging both to what precedes and to what follows. Examples are—
(i) a goo(d)deal, (ii) wha(t) to do, (iii) nex(t) time, (iv) simp(le)ly, (v) England < Englaland, (vi) eighteen < OE eahtatiene, (vii) honesty < honestete, (viii) Glou(ce)ster,

(ix) Wor(ce)ster (wustə), familiarly, (x) pro(ba)bly, vulgarly, (xi) lib(ra)ry, (xii) Febr(uar)y. From other languages may be quoted Fr. cont(re)rôle, ido(lo)lâtre, Neu(ve)ville, Lat. nu(tri)trix, sti(pi)pendium, It. qual(che)cosa." (Language, p. 329).

Gutturalization/Velarization

When a sound is gutturalized or velarized, i.e. pronounced as velar, the change is called gutturalization or velarization; e.g.,

OIA. *tyaj* + *ghañ* > *tyāga*, *vac* + *nyat* > *vākya*.

OIA. *bhuj* + *ghañ* > *bhoga*, *pac* + *nyat* > *pākya*

[cf. Pā. *cajoḥ ku-ghīṇ-nyatoḥ*, VII. 3.52]

Palatalization

When a sound is palatalized with or without any palatal vowels, this change is called palatalization (cf. Collitz's law of palatalization); e.g.,

IE **penque* > OIA. *pañca*, Av. *pañca*, Goth. *pente*.

OIA. *kṛ* > *cakāra*, *khan* > *cakhana*,

OIA. *han* > *jaghāna*; *gam* > *jagāma*,

[cf. Pā. *kuhoś cuḥ*. VII. 4.62]

Cerebralization

When a sound, usually the dental, is turned into a cerebral either under the influence of *r*, *r*, *ṣ*, or spontaneously, this is called cerebralization; e.g.,

OIA. *vikṛta* > Vedic *vikāṭa*,

IE **oktōu* > OIA. *aṣṭāu*

Sometimes cerebralization is spontaneous, e.g.,

atati and *aṭati*,

sthā > *tiṣṭhati*

dṛh + *ta* > *dṛḍha*,

muh + *ta* > *mūḍha*.

[The *ṣa-iva* and *ṇa-iva* rules of Sanskrit grammar will come under this purview]

Dentalization

When a sound is dentalized, i.e., is turned into a dental sound, this change is called dentalization ; e.g.

√*vas* (dwell) > *avātsiś* (aor), 'thou art dwelt',

√*vas* (shine) > *vat-syati* (fut), 'will shine',

√*ghas* (eat) > *jighat-sati* (des), 'desires to eat',

√*majj* (dive) > *madgu* (VS) 'diver'.

Labialization

When a sound is labialized, i.e. pronounced labial either under the influence of a lip sound, or spontaneously, the process is called labialization. Examples of labialization in OIA is very rare. Only a few examples can be traced, where *b* interchanges with *v* ; e.g.,

pāḍviśa (VS.) > *pāḍbiśa* (RV.),

vāṇa (arrow) > *bāṇa*,

-*valśa* (twig) > *balśa*,

vlina (crushed) > *blina* (AV.)

Spirantization :

The term spirant means "a consonant in the articulation of which the breath is not wholly stopped, the articulating organs being so modified as to allow the sound to be prolonged."

In OIA. the *jihvāmūliya* and *upadhmāniya* sounds are spirants ; e.g.,

antaḥkaraṇa > *antaḥkaraṇa*,

antaḥpura > *antaḥpura*.

Rhotacism

The change of intervocalic /s/ to /r/ is called rhotacism ; e.g.,

IE **dusmenos* > Ilr. **duzmanas* > OIA. *durmanas*.

OIA. *madhus + asti* > *madhur asti*,

OIA. *haris + iti* > *harir iti*

Between *r* and *l*, the old Iranian has *r*, "there seems to

have been a tendency to rhotacism in the Indo-Iranian period." [VG. 51a]. In Latin, rhotacism started towards the end of the old Latin period (300 B.C.); e.g., *lavāre* 'to wash', *videre*, 'to see' as opposed to *es-se* 'to be', *pos-se* 'to be able.'

Psilosis

Psilosis is the loss of the initial aspirate. This phenomenon is found in the Eastern Ionic which had lost the aspirate (*psilosis*) of an early Attic inscriptions, e.g.,

Gk. *hāmes* / *hāme* (we) > Ionic *āmmes* / *āmme*

Gk. *humeis* (you) > Ionic *ūmmes*

In OIA this is mainly found in the reduplicative syllable (cf. Grassmann's law); e.g.,

dhā > *dadhāti* (< **dhadhāti*),

han (< *ghan*) > *jaghāna* (< **jhaghāna*)

chand (pleasure) > *cacchanda* (< **chacchanda*).

In some words psilosis can be inferred from the evidence of cognate languages, e.g. *budh* < IE **bheudh*, *bāhu* (< IE **bhāghu*), *bandh* (cf. Skt. *abhāntsīt*) (< IE **bhendh*), etc.

ya-śruti and va(wa)-śruti :

ya-śruti and *va-śruti* literally mean the lighter pronunciation of *ya-kāra* and *va-kāra* which are heard after the vowel sounds. The very word *śruti* denotes that the rules of *ya-śruti* and *va-śruti* are meant for pronunciation and not for writing, and the pronunciations of *ya-kāra* in *ya-śruti* and *va-kāra* in *va-śruti* are lighter than the original pronunciation of *ya-kāra* and *va-kāra*. This lighter pronunciation is described as *laghu-prayatnataṛa*. That Sanskrit had the light pronunciation of *ya-kāra* and *va-kāra* is borne out by the fact that Pāṇini had recorded this in one of his sūtras : *vyor laghu-prayatnataṛaḥ śākaṭāyanasya* (VIII. 3.18). Bhaṭṭojī Dikṣita explains *laghu-pratnataṛa* thus : *yasyocāraṇe jīhvāgropāgra-madhyamūlānām śaithilyam jāyate sa laghuccāraṇaḥ*, i.e., "The lighter articulation results from the relaxation of the muscles and the organs

employed in speech. The places of pronunciation are palate etc, the organs are the root, the middle and the tip of the tongue. When the contact of the tongue with the various places is very light, the articulation is *laghu-prayatnatara*." [Bose]. For example,

- (i) *sakhe + āgaccha > sakhayāgaccha*
sakhe + ehi > sakhayehi
sakhe + ucyatām > sakhayucyatām.
- (ii) *prabho + āgaccha > prabhavāgaccha*
prabho + ehi > prabhavehi
prabho + ucyatām > prabhavucyatām

Analogy :

It frequently happens that a certain group of words are associated together in the mind of the speaker. This association may be due to phonetic changes or otherwise ; and when another word seemingly related to that group comes along, the human mind desires to put the new word also in a form such as may make it recognizable as belonging to that group. This is the case of analogy. For example, in Sanskrit, the feminine nouns ending in *i* and *u* (like *matī* and *dhenu*) have two forms in singular of dative, ablative, genitive and locative, one form is like *i* and *u* of masculine nouns (like *hari* and *sādhu*), while the other is like *ī* and *ū* of feminine nouns (like *nadī* and *vadhū*). And taking these two forms on the analogy, we have two forms in feminine *i* and *u*.

Folk-etymology

Folk-etymology or False-etymology (also known as Popular etymology) is the "popular transformation of a strange word so as to give it an apparent relationship to another word better known." "It is the result of popular instinct", says Graff, "for associating together words which resemble each other in sound and perhaps in meaning although there is no historical relationship between them." For example, the English word 'sparrow-grass' from Latin *asparagus* has nothing to do with

sparrow and grass, though the plant is neither a grass nor liked by sparrow ; 'craw fish' is not fish at all and has nothing to do with the craw. Similarly, 'standard' has nothing to do with stand, but comes from old French 'estandard' > mod, French *estandard* (cf. Lat. *extendo*) ; and 'cutlet' is not related to cut but comes from Lat. *costa* (rib). Almost in all the standard languages, this type of folk-etymology is found.

In Sanskrit literature also we sometimes come across some fanciful derivations, perhaps as a result of false or folk-etymology. Thus the word *māṃsa* is derived as

*māṃ sa bhakṣayitām utra, yasya māṃsam ihādmyaham |
etan māṃsasya māṃsatvaṃ pravadanti manīṣiṇaḥ ||*

[Manu. V. 55]

'the animal whose flesh I eat in this world, will eat me in the next world, that is why, it is called *māṃsa* (meat).

putra is derived from *put* + *trāi* because of the idea that the son protects the father from the hell, called *put* :

*punnāmo narakād yasmāt trāyate pīṭaram sūtaḥ |
tasmāt putra iti proktaḥ svayam eva svayambhūva ||*

Kālidāsa suggests the following explanation of the name of *Umā* and *Aparṇā* in his *Kumārasambhava* thus.

*tām pārvatīyabhijanena nāmnā bandhupriyāṃ
bandhujano juhāva |
umeti mātṛā tapaso niṣiddhā paścād umākhyāṃ
sumukhī jagāma [I. 26]*

'The body of her relatives called her *Parvātī* (lit. mountain's daughter) to whom her relatives were so dear, a name derived from the family of her father ; subsequently when her mother dissuaded her from her resolve to practise penance by saying " (oh child !) *mā* (no more penance), the lovely faced girl was thenceforward known by the name of *Umā*'.

*svayam viṣṭha-druma-parṇa-vṛttitā parā hi kṛṣṭhā
tapasas tayā punaḥ |
tad apyapākīrṇamataḥ priyaṇvadāṃ vadantyaparṇeti ca tām
purāvidāḥ || [V. 28]*

'To subsist on leaves of trees that drop withered of their own accord is the utmost height that penance can reach ; she, however, left off even that, this is reason why people versed in ancient lore call that sweet-tongued girl Aparṇā'.

Analogy plays an important part in folk-etymology and it is found in the following verse :

*Kumbhakarṇe bhakāro'sti bhakāro'sti Vibhīṣaṇe |
jyeṣṭha-putre kula-śreṣṭhe bhakāro nāsti rāvaṇe ||*

when an old man said Rābhāṇa instead of Rāvaṇa.

One Sanskrit scholar knowing Arabic and Persian derives the three Arabic words *miyā*, *mālīka* and *mollā* with the help of the Uṇādi suffix *ḍiyā*, *ḍālīka*, and *ḍollā* to the root *mā*. (*ḍ* is a technical term used in Sanskrit suffixes in order to elide the final vowel of the root to which it is added). This is summed up in the following verse :

*āuṇādi se sādḥke liyā miyā mālīka mollā |
mā-dhātu se pratyaya kiyā ḍiyā ḍālīka ḍollā ||*

For the name Śakuntalā (*śakunta* + √*lā* + *ka*) the explanation is given as follows :

*nirjane tu vane yasmāt śakuntāiḥ parivāritā |
Śakuntaleti nāmāsyāḥ kṛtāñcāpi tato mayā ||*

"Because [she] was covered up (i.e. protected) by a bird (i.e. Śakunta) in a lonely forest, her name Śakuntalā is given (lit. made) by me."

Folk-etymology apparently seems to be correct, but historically it is a false etymology.

Metanalysis :

Metanalysis is the wrong analysis of a word. It is due to analogy sometimes a word is wrongly spelt, and as a result, a new word is originated. Words originating by this process is called metanalysis. For example, the origin of the word *dhava* meaning 'husband' from *vidhavā*, Lat. *viduus* (fem. *viduā*), Germ. *witwe*, Eng. *widow*, IE. **uidhegos*, Gk. (e)*itheos* had nothing to do with *vi-dhava*. The meaning of the word was changed at the time of Yāska (5th cent. B.C), but at the time of Śākalya (prob. 8th/9th cent. B.C) the original meaning of the word was preserved, as he did not analyse the word in the padapāṭha by putting an avagraha in between *vi* and *dhava*. In a similar way, *sura* (god) < *asura* (= *asu* + *ra*), *ambaka* (eyes) < *tryambaka* (cf. *tri-locana*), *dam* (= wife) < *dampatī* where *dam* is Lat. *domus*, Eng. *domestic* meaning house.

CHAPTER SIX

Sandhi

Sandhi is an euphonic combination of two sounds caused by quick utterance without any pause in between the two sounds (*ardha-mātroccāraṇa-kālenāvyavahitayor varṇayor druta-taroccāraṇaṃ sandhiḥ*). Sandhi is possible between two vowels or two consonants, or between a consonant and a vowel. It can be possible in a word, or between the final and initial sounds of a word in a sentence.

From the nature of the cognate languages it is presumed that IE had the sandhi system. It is difficult at present to find out the exact nature of IE sandhi, "yet there are reasons to suppose, that already in the Indogermanic (=IE) period the explosives and spirants were voiced or voiceless according to their position before voiced or voiceless explosives and spirants. The double forms Gk. *proti* = Skt. *prāti* and Gk. *prōs* = Skt. *prāty* may prove, that in the mother-language *i* before sonants became a semi-vowel, which suggests the supposition, that this was also the case with *u*. The simultaneous existence of the Indian dual-endings *-āu* = Goth. *-au* (in *ahtau*) and *-ā* = Gk. *-ō* allows the conclusion, that yet in a time of dialectic continuity the Ing. (=IE) diphthong *-ōu* before certain consonants or groups of consonants was simplified to *-ō*. Gk. *ākmōn* and Skt. *āsmā*, Gk. *patēr* and Skt. *pitā* stand in a similar relation to each other. By the side of roots beginning with *s* we often find doublets without that initial consonant (Skt. *sthāgāmi* : Lat. *tegō*, Goth. *stautan* : Skt. *tudāmi*) and hence we may conclude, that before the end of the Indogermanic period the initial *s* was lost, when preceded by a word ending in *s*." [Sph. pp. 95-96].

In a Sandhi the final and initial sounds of two contiguous words are liable to modifications or changes. These changes are noticed in vowels and consonants. In vowels these changes are either contractions or diphthongization, or vocalization ;

but in consonants, they are mainly assimilation, or modifications to different direction.

Linguistically sandhi is of two types : external and internal, though basically the phonetic principles are the same in both the cases. In the external sandhi the changes of final and initial sounds of words are affected or modified, whereas in the internal sandhi the changes occur internally to the nominal stems or verbal roots when suffixes or terminations are added to it.

I. External Sandhi

Sound changes in external sandhi are vast and varied. There can be many rules for Sandhi, but for our practical purposes only a few are cited below to understand the nature of modification of sounds.

I. Contraction :

Two homogeneous sounds are generally contracted (cf. Pā. *akāḥ savarṇe dīrghaḥ* || VI. 1.101). e.g.,

$\tilde{a} + \tilde{a} > \tilde{a}$, $na + asti > nāsti$, $rājā + abhūt > rājābhūt$, $indra + \tilde{a} > indrā$,
 $vidyā + ālayaḥ > vidyālayaḥ$.

$\tilde{i} + \tilde{i} > \tilde{i}$, $asti + iha > astiha$, $adhi + iśvaraḥ > adhiśvaraḥ$, $devī + iha > devīha$.

$\tilde{u} + \tilde{u} > \tilde{u}$, $su + uktam > sūktam$,

$\tilde{r} + \tilde{r} > \tilde{r}$, $pitr + ṛṇam > pitṛṇam$

$\tilde{l} + \tilde{l} > \tilde{l}$, $hot\tilde{l} + \tilde{l}kāraḥ > hot\tilde{l}kāraḥ$.

II. Diphthongization (guṇa and vṛddhi)

When an \tilde{a} -vowel is followed by an \tilde{i} or \tilde{u} -vowels, the result is the contraction *e* and *o* (cf. Pā *ādguṇaḥ*, VI. 1. 87), and when the same vowel is followed by *e* and *o*, the result is the diphthongization (vṛddhi cf. Pā, *vṛddhir eci* VI. 1.88), e.g.,
 $deva + indraḥ > devendraḥ$, $gaṇgā + udakam > gaṇgodakam$; $adya + eva > adyāiva$, $māhā + airāvataḥ > mahāirāvataḥ$, $jala + ogha > jalāūgha$, $mahā + āuṣadhiḥ > mahāuṣadhiḥ$.

III. But \tilde{i} , \tilde{u} and r, l before a dissimilar vowel or diphthong are changed to its corresponding semi-vowels (y, v, r, l) [cf. Pā. *iko yaṇ aci*, VI. 1. 77 and *eco'yavāyāvah*, VI. 1. 78]. The \tilde{ay} and \tilde{av} are the regular representatives of IE $*\tilde{ai}$ and $*\tilde{au}$ before antevocalic. For example,

iti + uktvā > ityuktvā, madhu + iva > madhviva, pitṛ + artham > pitrartham.

śe + āte > śayāte, rāi + e > rāye, go + e > gave, go + ā > gavā.

IV. Assimilation :

Assimilated sandhi is possible between heterorganic consonants ; e.g.,

(i) dental + palatal = palatal (cf. Pā, *stoḥ ścunā ścuḥ*, VIII. 4. 40)

tat + ca > tacca, tad + janya > tadjanya, tat + śṛṇomi > tacchrṇomi.

(ii) dental + cerebral = cerebral (cf. Pā *ṣṭunā ṣṭuḥ*, VIII. 4. 41)

ut + ṣalati > uṣṭalati, tad + ṣikā > taṣṭikā

ut + ḍīnaḥ > uḍḍīnaḥ, etad + ḍhakkā > etaḍḍhakkā.

(iii) dental + l = ll (cf. Pā *torli*, VIII. 4. 60)

tat + lokam > tallokam, mahat + lābhah > mahallābhah.

V. Voiced and voiceless plosives

As a rule voiceless plosives become voiced before voiced consonants and vowels, and voiced plosives become voiceless consonant before voiceless consonants, [cf. Pā. *jhalāñ jaśo'nte*, VIII. 2. 39]

ṛtvik + bhāṣāte > ṛtvigbhāṣate, tat + aham > tadaham, tad + phalam > tatphalam, tasmād + sāgarāt > tasmāt sāgarāt.

VI. Treatment of sibilants.

The sandhi rules regarding the sibilants (\acute{s} , $\acute{\acute{s}}$, s) may be formulated thus :

(i) Before c and ch the dental and cerebral sibilants are palatalized, i.e., visarga is turned into a palatal \acute{s} (cf. Pā. *stoḥ ścunā ścuḥ*, VIII. 4.40) ;

purṇaḥ + candraḥ > purṇaścandraḥ,

taroh + chāyā > tarośchāyā.

(ii) Before *ṣ* and *ṭh* the dental sibilant is cerebralized, i.e., visarga is turned into a cerebral *ṣ* (cf. Pā. *ṣṭunā ṣṭuḥ*, VIII. 4.41), e.g.,

bhītaḥ + ṭalali > bhītaṣṭalati,

bhagnaḥ + ṭhakkurāḥ > bhagnaṣṭhakkurāḥ

(iii) Before *t* and *th* the dental [or cerebral] sibilant is retained or turned into a dental sibilant. i.e., visarga is turned into a dental *s* (*visarjanīyasya saḥ*, VIII. 3.34); e.g.,

unnataḥ + taruḥ > unnatastaruḥ

kṣiptaḥ + thutkārah > kṣiptasthutkārah.

(iv) Before *k*, *kh* and *p*, *ph* dental (*s*) and cerebral (*ṣ*) become visarga, though in vedic this rule is violated in some examples (such as, *āyuskr̥notu*, *vāstoṣpatīḥ*); e.g.,

antaḥkaraṇa, *duḥkha*, *antaḥpura*.

(v) Before *a* and before voiced consonants, the *-as* becomes *o* and the initial *a-* disappears (cf. Pā. *haṣi ca*, VI. 1.114) e.g.,

tuṣṭas + aham > tuṣṭo'ham,

sadyas + jātaḥ > sadyojātaḥ.

II. Internal Sandhi

The rules of internal sandhi, though many of them agree with those of external sandhi, are not varied. Only a few of them are noted here. IE **ded-dhi > PII. *dazdhi > OIA. dehi* (<**dedhi*), IE **esdhi > PII. *azdhi > OIA. edhi* and the like are examples of internal sandhi from the Proto-Indo-Iranian stage.

I. In many cases before a vowel *ī*, *ū*, *ṛ* are changed to *iy*, *uv*, *ir/īr*, *ūr*; e.g., *dhī + i > dhiyi*, *bhū + i > bhuvi*, *yuyu + uḥ > yuyuvuḥ* (they have yoked), *gṛ + ati > girati*, *gṛ + pre. 3 sg. pass. > gīryate*, *pṛ + pūryate*.

II. *e*, *āi*, *o*, *āu* before suffixes beginning with vowels or *y* are changed into *āy*, *āv* respectively, e.g., *ne + ana > nayana*, *rāi + e > rāye*, *go + e > gave*, *nāu + ika > nāvika*, *go + ya > gavya*.

III. In declension and conjugation the consonants are not changed (like external sandhi) even before vowels; e.g., *vac + āni > vacāni* (let me speak), *vāc + ya > vācya*.

IV. The labial *m* before *y*, *r*, *l* is unchanged; e.g., *kām-yah*, *tām-ra*, *am-la*, but before *v* it becomes *n*, e.g., *jaganvān* (having gone).

V. Dental *s* is changed to cerebral *ṣ* in some declensional and conjugational forms if the preceding vowel is not *a* or *ā*; e.g., *sarpīṣā < sarpis*, *vākṣu < vāc*, *suṣvāpa* (he slept) < *svap*.

MORPHOLOGY

CHAPTER SEVEN

Declension of Nouns

I. Characteristics of Noun

A noun is characterised by number, gender, cases, case-terminations or endings (*sup*) and declension.

Number : On comparison of all IE languages, it is postulated that the IE had three numbers—singular, dual and plural—which are preserved in Sanskrit, Greek and Latin in particular, and in Gothic and other languages, only two numbers, singular and plural, are survived. Dual number is lost in many IE languages and also in modern European languages. Dual number was originally used in referring to a pair of words (e.g., Skt. *bāhū*, Gk. *pēkhu*) and in most of the cases the numerical words two (Skt. *dvāu*, Gk. *duō*, Lat. *duo*), and both (Skt. *ubhāu*, Gk. *amphō*, Lat. *ambo*) were used to indicate duality and as a result perhaps ultimately in course of time it was lost in many languages.

Gender : There were three genders in IE—masculine, feminine and neuter, and this is more or less preserved in almost all the IE languages, particularly in Sanskrit, Greek, Latin, Gothic and others, and originally the gender was used to indicate the natural genders of things. Later on, of course, the grammatical gender entered into the picture. As a result, *dāra* in Sanskrit meaning 'wife' is masculine and *kalatra* meaning also 'wife' is neuter. So also is the case of other grammatical suffixes by which a grammatical gender is indicated.

Cases : As far as the cases are concerned, IE had eight cases including vocative and genitive, though they are not strictly cases according to Sanskrit grammarians, as they do not stand in any syntactical relation to the other members of

the sentence. The eight cases are—nominative, accusative, instrumental, dative, ablative, genitive, locative and vocative. All these cases are preserved in Sanskrit, whereas in Greek, Celtic and Gothic instrumental, ablative and locative are lost or merged with dative and genitive. In Latin only instrumental and locative are lost, whereas in Balto-Slavic only ablative is lost.

As most of the IE case-terminations are lost in most of the IE languages, there arose a type of cases known as 'syncretism', that is to say, the case-terminations expressing two or three ideas of the cases by one termination whose meaning solely depends on the use of it in the sentence. Sanskrit is not very much affected by this process of syncretism. For singular, dual and plural, there were different case-terminations in IE and they are also preserved in Sanskrit with the following modifications—

(1) Nominative and accusative duals have more or less the same terminations.

(2) Instrumental, dative and ablative duals have the same terminations, so also the genitive and locative.

(3) Dative and ablative plurals are of the same terminations. In other cases the terminations are different.

(4) Except the *a*-base, ablative and genitive singulars are of the same terminations, e.g. OIA. *agneḥ*, *sādhoh* are both abl. and gen.

The declension is also characterised by ablaut grades. In some cases we have the strong grade of ablaut (normally in the singular) and in some cases we have the zero grade of ablaut (normally in the dual and the plural, except nominative and accusative plurals).

As the words end either in vowels or consonants, the declensional pattern of IE are also of two types—vowel and consonantal declension. In the consonantal declension the IE endings are normally preserved, whereas in vowel declension the bases are changed in accordance with the ablaut grade when the endings are added to it.

In the following the origin of IE case-terminations is given :

	Singular	Dual	Plural
Nom.	—s, ϕ	— $\bar{o}(u)$, — $\bar{i}\bar{u}$ <i>ei, oi</i>	— $\bar{e}s$, $\bar{o}s$
Acc.	—m/ η	— $\bar{o}(u)$, — \bar{i} , \bar{u}	—ns/ ηs
Ins.	— \bar{e} , — \bar{o} , —bhi, —mi	—bhi $\bar{o}m$, —m \bar{o}	—bhis — $\bar{a}is$ —mis
Dat.	— $\bar{o}i$, $\bar{a}i$	—bhi $\bar{o}m$, —m \bar{o}	—bhi $\bar{o}s$, —mos
Abl.	—es, $\bar{o}s$, s, — $\bar{e}d/\bar{o}d$	—bhi $\bar{o}m$, —m \bar{o}	—bhi $\bar{o}s$, —mos
Gen.	—es > —os, s — $\bar{s}i\bar{o}$	— $\bar{o}s$	—om/— $\bar{o}m$
Loc.	—i, ϕ	— $\bar{o}s$	—isu
Voc.	— ϕ	— $\bar{a}(u)$, \bar{i}	—es

Singular

Nom. Sg.

In the nominative singular, four case-terminations are used. These are,

- (i) s
- (ii) without endings (= bare stems),
- (iii) by lengthening the vowel of the stem ending,
- (iv) with s and lengthening of the stem-ending.

(i) s is added to OIA a (<IE * o-stem), i, u stems ; e.g.,
IE**ulquo-s* > OIA. *vŕka-s*, Lith. *vilkas*, Gk. *lŭkos*, Lat. *lupus*,
Goth. *wulfs*.

OIA. *avih*, Lat. *ovis*, Lith. *avis* (sheep), cf. Gk. *pollis*.

OIA. *sūnuh*, Goth. *sunus*, cf. Gk. *pēkhus*, Lat. *fructus*.

(ii) Without ending :—(*hal-nyābbhyo dirghāt sutisyaṣṛkṭa-hal* (6.1.68). No ending is added to OIA. *ā*, *i*-stems :

IE **ekyā* > OIA. *aśvā*, Lat. *equa*, cf. Gk. *khōrā*, cf. Goth. *gibā* (gift)

OIA. *devī*, Goth. *mawi* (girl)

(iii) by lengthening :—(*ap-tṛn-tṛc-svasṛ-naptṛ-neṣṭṛ-tvaṣṭṛ-kṣatṛ-hotṛ-potṛ-praśāstṛṇām* || VI. 4. 11).

In *n*, *r* and *s*-stems, the final vowel is lengthened after dropping the *s*-ending ; e.g.

IE **pāter-s* > OIA. *pitā* (< **pitars*), Gk. *patēr*, Lat. *pater*, Goth. *fadar*.

OIA. *dātā*, Gk. *dōtōr*, Lat. *dator*.

OIA. *durmanāḥ* (hostile), Gk. *dusmenēs*.

(iv) With *s* and lengthening :—(*gato ṇit* || 7.1.90 and *rāyo hali* || 7.2.85)

In diphthongal stems, *s* is added and the stem is lengthened, e.g.

IE **nāus* > OIA. *nāu-h*, Gk. *nāus*, Lat. *nāvis*.

IE **dīēus* > OIA. *dyāuḥ*, Gk. *zeús*, Lat. *diēs*.

IE **gōūs* > OIA. *gāu-s*, Gk. *bous*, Lat. *bos*.

Acc. Sg. *m/ṇ*

The accusative sg. ending of the masculine and feminine was *m* and *ṇ* (= OIA *a*, Gk. *a*, Lat *em*). The former (i.e. *m*) is added to the stem ended in a vowel and the latter *ṇ* is added to the consonantal stem. In OIA the consonant ending is *am* which is nothing but *ṇ + m* from the accusative of the vocalic stem, e.g.,

* *uqʷo-m* > OIA. *vrkam*, Gk. *lukon*, Lat. *lupum*.

* *ekyā-m* > OIA. *aśvām*, Lat. *equam*, cf. Goth. *giba*.

* *pāter-ṇ* > OIA. *pitā-am*, Gk. *patera*, Lat. *patrem*.

* *dōtōr-ṇ* > OIA. *dātāram*, Gk. *dōtāra*, Lat. *datōrem*.

* *nāuṇ* > OIA. *nāvam*, Gk. *nēa* (Hom.) Lat. *nāvem*.

Ins. Sg. $\bar{e}|\bar{o}$: [$\bar{t}\bar{a}$ - \bar{n} asi- \bar{n} asām inātsyāḥ (7.1.12), $\bar{a}\bar{n}$ o nāstriyām (7.3.120)]

The instrumental ending \bar{e} or \bar{o} is added to the e or o -stem and this is evidently by contraction becomes long \bar{e} or \bar{o} ; e.g.

$\bar{u}|\bar{q}^o\bar{o}-\bar{e}|\bar{o}$ > OIA. $\bar{v}\bar{r}k\bar{a}$ (vedic), Lith. $\bar{v}i\bar{k}\bar{u}$, Goth $\bar{w}u\bar{l}f\bar{a}$.
bhi, mi

Except Indo-Iranian, the instrumental was not preserved in any other IE languages—barring some isolated forms in Greek. After examination it is surmised that there were two parallel sets of endings—one with bh in most of the IE languages other than Sanskrit and the other with m in Germanic and Balto-slavic. In older form of Greek and Latin the bh -type is represented as Gk. $\bar{p}hi$, Lat.- $\bar{b}us$, and $\bar{p}hi$ in Homer serves in a variety of case-functions and is indifferent to number, e.g. $\bar{b}i\bar{e}-\bar{p}hi$ 'by might', $\bar{t}hur\bar{e}-\bar{p}hi$ 'at the door', $\bar{o}res-\bar{p}hi$ 'on the mountains', $\bar{a}po\ \bar{n}au-\bar{p}hi$ 'from the ship', Gk. $\bar{t}heo-\bar{p}hi$ 'by God', 'by gods', Lat. $\bar{d}e\bar{a}\bar{b}us$ 'by goddesses', old Irish $\bar{f}er\bar{a}ib$ 'by men', Arm. $\bar{m}ardou$ 'by man'. This bhi seems to be the same with OIA $bhi-s$, as in $\bar{a}\bar{s}v\bar{a}bh\bar{i}-s$.

The mi occurs in the Balto-Slavic in the singular and plural and in the Germanic only in the plural ; e.g., Goth. $\bar{w}u\bar{l}f\bar{a}m$ 'by wolves', Lith. $\bar{r}\bar{a}\bar{n}ko-\bar{m}is$ (by hands'), OChSl. $\bar{v}l\bar{u}ko-\bar{m}i$ 'by a wolf'.

$\bar{n}\bar{a}$ and $\bar{i}na$ are later developments.

Dat. Sg. $\bar{a}i$, $\bar{o}i$

The dative case-ending was originally $\bar{a}i$ > OIA. e for all stems. In \bar{a} and o declensions it became contracted with the stem-ending making it $\bar{a} + \bar{a}i$ > $\bar{a}\bar{i}$, and $o + \bar{a}i$ > $\bar{o}\bar{i}$; e.g., IE $\bar{u}|\bar{q}^o\bar{o}-\bar{a}i$ > OIA. $\bar{v}\bar{r}k\bar{a}ya$, Lat. $\bar{l}up\bar{o}$ (Old Lat. $\bar{p}opuloi$) OIA. $\bar{a}\bar{s}v\bar{a}y-\bar{a}\bar{i}$, Gk. $\bar{k}h\bar{o}r\bar{a}\bar{i}$, $\bar{t}im\bar{e}\bar{i}$, Lat. $\bar{e}quae$, Goth $\bar{g}ib\bar{a}\bar{i}$.

This dative ending is regularly preserved in Sanskrit and Latin ; e.g.

OIA. $\bar{a}gn\bar{a}y-e$, cf. Lat. $\bar{h}ost\bar{i}$

OIA. $\bar{s}un\bar{a}v-e$, cf. Lat. $\bar{f}ructu\bar{i}$

OIA. $\bar{g}\bar{a}v-e$ Lat. $\bar{b}ov\bar{i}$

OIA. $\bar{n}\bar{a}v-e$ Lat. $\bar{n}\bar{a}v\bar{i}$

OIA. <i>pad-ē</i>	Lat. <i>pedī</i> .
OIA. <i>rājñ-e</i>	cf. Lat. <i>homīnī</i>
OIA. <i>nāmn-e</i>	Lat. <i>nōmīnī</i>
OIA. <i>bhārat-e</i>	Lat. <i>ferentī</i>
OIA. <i>pitṛ-e</i>	Lat. <i>patri</i>
OIA. <i>dātr-é</i>	Lat. <i>datōrī</i>
OIA. <i>janas-e</i>	Lat. <i>generī</i> .

"In other stems the old dative was supplanted by the locative in Greek, but the original dative was preserved in isolated forms" [CGGL, p. 149] ; e.g.,

OIA. <i>dāvāne</i> , Gk. <i>dounai</i> (Att. inf).
OIA. <i>vidmāne</i> , Gk. <i>idmenai</i> (Hom).
Gk. <i>khamai</i> , Lat. <i>humī</i> .

Abl. Sg. *es|os, s, ēd|ōd*

The abl. case-endings *es, os, s* which stand in ablaut relation to each other were originally the same with the genitive except *ēd* or *ōd* which developed as special case-endings of the *o*-stem during the IE period. *es* and *os* occurred after consonants and *s* after vowels. The variation between *es* and *os* originally depended on accent. "*es* was originally used when it had the chief accent of the word, and *os* when the accent preceded the case-ending. Latin generalized the former and Greek the latter. It cannot be determined whether the Sanskrit ending-*aḥ* represents *es* or *os* because *e* and *o* regularly fell together in *a* [CGGL, p. 148] ; e.g.,

Vowels : <i>ā < ās</i> =	OIA. <i>āsvāyāḥ</i> , of a mare,
	Gk. <i>khōrās, skiās, timēs</i> ,
	Goth. <i>gibōs</i> , of a gift,
	Lat. <i>familiās</i>

i < ets/ois

-	OIA. <i>agnéh</i>
	Gk. <i>póleos, poleos</i>
	Goth. <i>anstāis</i>
-	OIA. <i>dhiyah</i> , Gk. <i>klos < *kijos</i>

u < *eus/ous* = OIA. *sūnóḥ*, Goth. *sunáus*

OIA. *tanúvaḥ*, cf. Gk. *ikhthúos* cf. Gk. *pekheōs*,
pekheos,

OIA. *paśvāḥ*, cf. Gk. *gounōs* (< **gonFos*), *dourós*,
(< **dorFos*)

= OIA. *nāvāḥ*, Gk. *nēos* (Ion), *neōs* (Att), Lat. *nāvis*,

= OIA. *divāḥ*, Gk. *dios*,

= OIA. *gávaḥ* (vedic), Gk. *bóos*.

Consonants : OIA. *padah*, Gk. *podoš*, Lat. *pedis*,

OIA. *rājñah*, cf. Gk. *poiménos*, *daímonos*

OIA. *bharataḥ*, Gk. *phérontos*, Lat. *ferentis*

OIA. *janasaḥ*, Gk. *geneos*, *genous*, Lat. *generis*

OIA. *durmanasaḥ*, Gk. *dusmenéos*, *dusmeneōus*

OIA. *pituḥ*, Gk. *patrós*, Lat. *patris*

OIA. *dātuḥ*, Gk. *dōtoros*, Lat. *datōris*.

Abl. *ēd/ōd*

The abl. ending *ēd/ōd* was added to the *o*-base which was also contracted with the preceding vowel, after the analogy of the pronominal endings. This ablative ending was preserved in OIA and Lat. only.

IE. **u₁qwo-ōd* > OIA. *vrkād*, cf. Old Lat. *Gnaivōd*, *meritōd*,
Insc. Lat. *facilumēd* = *facillumēd*.

Gen. Sg. *sīo*

Apart from **es*, **os*, **s*, the gen. ending **sīo* added to the *o*-stem only is found in OIA and in Greek, and this ending was originally found in pronouns only, and later on after the analogy of the genitive of the demonstrative pronoun it spread from pronouns to nouns also in some languages, e.g..

IE. **qwo-sīo* > OIA. *kasya*, Lat. *cuius*.

IE. **to-sīo* > OIA. *tasya*, Gk. *toīo* (Hom), *toū* (Cl.)

IE. **u₁qwo-sīo* > OIA. *vrkasya*, Gk. *lúkoio*

In Latin it is found with *-s* in a few words, e.g., Lat. *eius*,
OIA. *asya*.

Loc. Sg. *i*

The locative case-ending was *i* which was added to the *o*, *ā*,
ī, *ū* and consonantal stems. In the *i* and *u* stems the locative

ended in *ēi* and *ēu* which were the lengthened form of the stems. In the consonantal stems the *i* is added direct to the stem. e.g.

IE **ulquo-i* > OIA. *vr̥ke*, cf. Gk. dat. *lūkoi*, cf. Lat. *belli*, *domi*.

IE **ped-i* > OIA. *pad-i*, Gk. *podī*, Lat. *pede*.

In the loc. sg. of consonant stems, ended in *n*, *r* and *s* there were also simple stem forms without ending, besides the usual type with *-i*. Thus from *n*-stem the forms *-man* and *-mani* are available in vedic to which correspond the Greek infinitives in *-men* as in *dōmen*, *idmen*. Similarly OIA. *mūrdhān* 'on the head', Gk. *aiēn*, *aiēs*.

The regular forms of the locative of *i*- and *u*-stems were preserved in OIA, Latin and Gothic ; e.g.,

Vedic *agnā*, Lat. *hostī*, Goth. *anstái*.

Vedic *sūnāu*, Goth. *sunáu*, Lat. *senatū*, *fructū*.

Other examples are as follows.

OIA. *dhiyī*, Gk. *kīī* (<**kīīi*)

OIA. *tanūvī*, Gk. *ikhthui*

OIA. *nāvī*, Gk. *nēi*, Lat. *nāve*

OIA. *gāvī*, Gk. *boi*, Lat. *bove*

OIA. *padī*, Gk. *podī*, Lat. *pede*

OIA. *rājani*, cf. Gk. *daimonī*, Lat. *homine*

OIA. *bhārati*, Gk. *phéronti*, Lat. *ferente*

OIA. *pitari*, Gk. *patēri*, Lat. *patre*

OIA. *jānasi*, Gk. *gēnei*, Lat. *genere*

OIA. *durmanasi*, Gk. *dusmenei*

In Greek the locative of the *o*-declension occurs only in isolated forms, e.g. Gk. *khōrāi*, *theāi*, *tīmēi*, *isthmoī*, Lat. *Rōmae*, Old Lat. *Rōmai*.

In some adverbial forms this locative ending is also preserved in Greek ; eg. *poi*, *pei*, *ekei* beside *oikoi* and *oiket* (at home).

The Greek adverbial particle *thi* was also used to express the locative, e.g., *állothi* (elsewhere), *ouranóthi* (in heaven).

Dual

Nom + Acc. Dual

- (1) *
- \bar{o}
- /
- $\bar{o}u$
- added to the
- o*
- stems >
- $\bar{o}u$

IE * $\mu_l q_{uo}$ - \bar{o} / $\bar{o}u$ > OIA. $\nuṛkā$, $\nuṛkāu$, Gk. $lúkō$, $dúō$

- (2) *
- ei/oi
- > OIA.
- e*
- (neuter)

* $iug-oi/ei$ > OIA. *yuge*.

In classical *dvā-daśa*, Lat. *duodecim*. In Latin there is no dual number left, except, *ambō*, *octō*, *duō*. Gk. dual numbers are $\bar{o}/\bar{a}/e$ (consonantal). In Sanskrit \bar{a} stem, *-ai* > OIA. *e*; e.g., IE * $\acute{e}k_{uā}-ai$ > OIA. *aśve*.

Ins + Dat + Abl Dual : IE * $bh_i\bar{o}/\bar{e}-m$ > OIA. *bhyām*, Av. *byām*, *byā*.

* $\mu_l q_{uo}$ - $bh_i\bar{o}/\bar{e}m$ > OIA. $\nuṛkābhyām$.Gen + Loc. Dual : IE **ous* > PIA. **ous* > OIA. $\bar{o}s$ IE. * $\mu_l q_{uo}$ -*ous* > OIA. $\nuṛkayos$

Plural

Nom. pl. * $\bar{e}s$ is added to the *o*-stems > $\bar{o}s$ > OIA. $\bar{a}s$ [Found in OIA. Goth. Oscan-Umbrian]

IE. * $\mu_l q_{uo}s$ > OIA. $\nuṛkāś$, Goth. *wulfōs* (wolves),

In Gk. Lat. and Balto-slavic this is replaced by **oi* (the *i* being the pronominal pl. sign)

Gk. $lúkoι$, Lat. *lupī*, OChSl. $vľŭci$, Lith. *vilkai*IE. **toi* > OIA. *té*, Gk. *toi*, Lat. *istī*, Goth. *ƿai*, OChSl. **ri*.OIA. $\bar{a}sas$ (Pāli. $\bar{ā}se$) is a reformation from *as* + *as*, $\nuṛkāśas$,

Acc. pl. * $ns/*_ns$ is added to the *o*-stems > *-ons*. $_ns$ is added after a consonant.

$\mu_l q_{uo}$ -*ons* > OIA. $\nuṛkān$ < * $\nuṛkāns$, Goth. *wulfans*, Gk. $lúkons$, $lúkous$, Lat. *lupōs*, Lith. *vilkuns* (dialectal), otherwise *vilkūs*.

Neuter plural : Nom. and Acc. neuter pl. were in \bar{a} which actually came from a feminine nom. sg. in \bar{a} . The meaning was perhaps a collective one.

Sanskrit $\bar{a}ni$ is a reformation from \bar{a} + *ni* following perhaps $nāmāni$.

Ins. pl. **āis* added to the *o*-stems > *ōis* (by contraction *o + i* > *ō*)

IE **ul̥q̥uōis* > OIA. *vrkāih*, Lith. *vilkays*, cf. Gk. *lúkois*, *theoís*, Lat. *lupis*

The Gk. and Lat. endings were originally instrumental, and they were transferred to the dative, the instrumental being lost in Greek and Latin.

-*oibhis* (stem vowel *o* + pronominal pl. *-i* + ins pl. *bhis*)

**ul̥q̥uoibhis* > OIA. *vrkebbhis* (vedic), cf. Gk. *biē-phi* (by might)

Dat. Abl. pl. — **oibhios*. OIA. *bhyas* < Vedic *bhiyas*, Av. *byō*, <PIA. **bhias* < **bhiās* Lat. *bos*, *bus*,

This is formed with the demonstrative pronoun (OIA. *tebhyas*) plus fem. Ins. pl. *ābhis* (OIA. *tābhis*). OIA. *tu-bhyas*, Lat. *tibi*.

Gk. *biē-phi* (by might), *thúrē-phi* (at the door),

apō nau-phi (from the ship).

cf. Gk. *lúkois*, *theoís*.

**ul̥q̥uobhios* > OIA. *vrkebbhyas*.

Gen. Pl. *ōm* :

Gen. pl. *ōm* is added to the *o*-stem > *ōm*. But in OIA. it is remodelled after the genitive pl. of *-n*-stem making it *nām* < **nōm*.

**ul̥q̥uōm* > OIA. *vrkānām*, Gk. *lukōn*, cf. Osc. *Núvlanúm*.

In Lithuanian and Old English, the final nasal was usually lost ; e.g., Lith. *vilkū* < **vilkum*, OE. *wulfā* < **wulfām*.

Loc. Pl. *isu* :

Loc. pl. **-su* > OIA. *-su*, Av. *hu*, Old. Lith. *su*, OChSl. *chū*, Gk. *si* added to the *o*-stem with pronominal pl. *i* > *oisu* is found in OIA. and Slavonic. *oisi* is found in Gk. It is the primitive Gk. ending coming from *oisu* which was made after the loc. sg. ending *-i*.

ul̥quoisu > OIA. *vrkeṣu*, Gk. *lúkoisi*, OChSl. *vlūcechū*, Lat. *lupis*.

Declension : A full paradigm (declension) is given below :

Sing.	IE	OI A.	Gk.	Lat.	Others
N	* <i>ulquo-s</i>	<i>vṛkas</i>	<i>lúko-s</i>	<i>lupu-s</i>	Goth. <i>wulfs</i> Lith. <i>vilkas</i>
A	* <i>ulquo-m</i>	<i>vṛka-m</i>	<i>luko-n</i>	<i>lupu-m</i>	Lith. <i>vilkāi</i>
I	* <i>ulquo + ē/ō</i> * <i>ulquō</i>	<i>vṛkā</i> (<i>vṛkeṇa</i>)	cf. Att. <i>pō</i> <i>lukōi</i>	cf. <i>lupō(d)</i> Lat. <i>pē</i>	
D	* <i>ulquo-ōi/āi</i>	<i>vṛkāya</i>	<i>lúkōi</i>	<i>lúpō</i> <i>numasioi</i>	Av. <i>haomai</i> Lith. <i>vilkui</i>
Ab	* <i>ulquo-ōd/ēd</i>	<i>vṛkād</i>	[<i>lúkō</i>]	<i>lupō(d)</i> <i>rectē(d)</i>	Lith. <i>vilkō</i>
G	* <i>ulquo-sio</i> - <i>esiō</i>	<i>vṛkasya</i>	<i>lúko-io</i> <i>lúkou</i>	<i>lupī</i> <i>mī</i>	OIr. <i>maoi</i> Lith. <i>vilkī</i>
L	* <i>ulquo-i</i>	<i>vṛke</i>	cf. <i>oikoi</i> <i>oikei</i> 'at home'	cf. <i>belli</i>	Lith. <i>vilke</i>
V	* <i>ulque</i>	<i>vṛka</i>	<i>luke</i>	<i>lupe</i>	

Dual	IE	Skt.	Gk.	Lat.	Others
N	<i>ulquo + ō</i> <i>ulquo + āu</i>	<i>vṛkā</i> (vedic) <i>vṛkāu</i>	<i>lúkō</i>		Lith. <i>vilku</i> Chsl. <i>vlūka</i> Goth. <i>ahtau</i>
A	"	"	"		"
I	<i>ulquo-bhi ō/ē/</i> <i>m</i>	<i>vṛkābhyām</i>			
D	"	"	<i>lúkoīn</i>		
Ab	"	"			
G	<i>ulquo-ous</i>	<i>vṛkayos</i>	<i>lúkoīn</i>		
L	"	"			
V	<i>ulquo-āu</i> <i>ulquo-ō</i>	<i>vṛkāu</i> <i>vṛkā</i>	<i>lúkō</i>		same as nom.

Plural	IE	Skt.	Gk.	Lat.	Others
N	<i>ulquo-ōs</i>	<i>vrkās</i>	<i>lúkoī</i>	<i>lupī</i>	Goth. <i>wolfōs</i> OChSl. <i>vľuci</i> Lith. <i>vilkoi</i>
A	<i>ulquo-ons</i>	<i>vrkān</i> <*vrkā- ns	<i>lúkons</i> (Cret) <i>lúkous</i>	<i>lupōs</i>	Lith. <i>vilkuns</i> <i>vilkūs</i> Goth. <i>wulfons</i>
I	<i>ulquo-ibhis</i> <i>ulquo-ōis</i>	<i>vrkebbhis</i> (vedic) <i>vrkāis</i>	cf. Gk. <i>biē-phi</i> (by might) <i>lúkois</i> / <i>eois</i>	<i>lupis</i>	Lith. <i>vilkūis</i>
D	<i>ulquo-ibhi os</i>	<i>vrkebbhy-</i> as	cf. Gk. <i>biē-phi</i> <i>nau-phi</i> (from the ship) <i>lúkois</i> <i>lukoisi</i>	<i>lupīs</i>	OChSl. <i>vľučechu</i>
Ab	<i>ulquo-ibhi os</i>	„			
G	<i>ulquo-ōm</i>	<i>vrkānām</i>	<i>lúkōn</i>	cf. Osc. <i>Núvlanum</i> <i>lupōrum</i>	Lith. <i>vilkū</i> <*vilkum
L	<i>ulquo-isu</i>	<i>vrkeṣu</i>	<i>lúkoisi</i>	<i>lupīs</i>	OChSl. <i>vľucechu</i>
V	<i>ulquo-ōs</i>	<i>vrkās</i>			

II. Declension of other stems

§1. IE ā-stem : *ekṡā* = OIA. *aśvā*, cf. Av. *haēna* (hostile host), cf. Gk. *khora* (land), *hippotēs*, *hippotā* (charioteer), Lat. *equa* (horse), Goth. *giba* (gift), Lith. *rañka* (hand), OChSl. *rainka* (hand).

Singular	IE	OIA.	Av.	Gk.	Lat.	Goth.	Others
N	<i>ekṡā</i>	<i>aśvā</i>	<i>haē'na</i>	<i>khōra</i> <i>hippotēs</i>	<i>equā</i>	<i>giba</i>	Lith. <i>rankā</i> Ochs. <i>ranka</i>
A	<i>ekṡā-m</i>	<i>aśvām</i>	<i>haen'im</i>	<i>khōran</i>	<i>equam</i>	<i>giba</i>	Lith. <i>rañkai</i>
I	<i>ekṡā</i>	<i>aśvā</i> <i>aśvayā</i>	<i>haēina</i> <i>haeinaya</i>	--	--	--	Lith. <i>rañki</i>
D	<i>ekṡāi</i>	<i>aśvāyāi</i>	<i>haeinayāi</i>	<i>khōrāi</i>	<i>equae</i>	<i>gibai</i>	Lith. <i>rañkai</i>
Ab	<i>ekṡā-s</i>	<i>aśvāyās</i>	<i>haeinayāθ</i>	--	<i>equā(d)</i>	--	Lith. <i>rañkos</i>
G	<i>ekṡā-s</i>	<i>aśvāyās</i>	<i>haeinayā</i>	<i>khōras</i>	<i>equae</i>	<i>gibōs</i>	Lith. <i>rañkos</i>
L	<i>ekṡāi</i>	<i>aśvāyām</i>	<i>haeinaya</i>	--	[<i>Rōmae</i>]	--	Lith. <i>rañkoje</i>
V	<i>ekṡā</i>	<i>aśve</i>	<i>haeinē</i>	<i>khōre</i>	<i>equa</i>	<i>giba</i>	Lith. <i>rankā</i>

Dual	IE	OIA.	Av.	Gk.	Lat.	Goth	Others
NA	ekūai	ašve	haeinē	khōrā	[equae]	—	Lith. ranki
IDab	ekūā-bhiom	ašvābhyām	D. haenabya	D. khōrain			Lith. ID. rañkom
GL	ekūā-os	ašvayos	G. haenayā	G. khōrain			
Plural							
N	ekūās	ašvās, ašvāsas	haenā	khōrai	equae	gibōs	Lith. rañkos
A	ekūās	ašvās	haenā	khōrans	equas	gibōs	Lith. rankās rankosnā
I	ekūā-bhis -mi(s)	ašvā-bhis	haenābiš	—	—	—	Lith. rañko-mi(s)
D	ekūā-bhi os	ašvābhyas	haenābyō	khōraisi	equabus	gibōm	Lith. rañkoms
Ab	"	"	"	—	"		Lith. "
G	ekūā-ōm	ašvā(n) ām	haenānām	khōrōn	equarum	gibō	Lith. rankū
L	ekūā-su	ašvāsu		—	—	—	Lith. rañko-su
V							

§2. IE *ī*-stem : IE **oṷi* = OIA. *avi*, cf. Av. *aziš* (snake), cf. Gk. *ophis* (snake), cf. Lat. *turris*, Lith. *naktis* (night), Goth. *anst* (favour).

Singular	IE	OIA.	Av.	Gk.	Lat.	Goth.	Others
N	<i>oṷi-s</i>	<i>avi-s</i>	<i>azi-š</i>	<i>ophis</i>	<i>turris</i>	<i>anst</i>	Lith. <i>naktis</i>
A	<i>oṷi-m</i>	<i>avi-m</i>	<i>aži-m</i>	<i>ophin</i>	<i>turrim</i>	<i>anst</i>	Lith. <i>nākti</i> ₁
I	<i>oṷi-ḍ/ē</i>	<i>avyā</i> <i>avīnā</i>	<i>aži</i>	—	—	—	Lith. <i>nakti-mi</i>
D	<i>oṷi-al</i> <i>oṷi-al</i>	<i>avaye</i>	<i>ažayaṣ</i>	<i>ophei</i>	<i>turri</i>	<i>anstai</i>	Lith. <i>nākezai</i>
Ab	<i>oṷois</i>	<i>aveh</i> <i>avyah</i>	<i>ažoiθ</i> , <i>aždeḍa</i>	—	<i>turri(d)</i>	—	Lith. <i>naktes</i>
G	"	<i>aveh</i> , <i>avyah</i>	<i>ažōiš</i>	<i>opheos</i> , - <i>ōs</i> <i>ophios</i>	<i>turris</i>	<i>anstais</i>	Lith. <i>naktēs</i>
L	<i>oṷei-e</i> <i>-ī</i>	<i>avā</i> , <i>avāu</i>	<i>aža</i>	—	—	—	Lith. <i>naktyē</i>
V	<i>oṷoi</i> , - <i>ei</i>	<i>ave</i>	<i>aže</i> <i>aži</i>	<i>ophi</i>	[<i>turris</i>]	<i>anst</i>	Lith. <i>nakte</i>

Dual	IE	OIA.	Av.	Gk.	Lat.	Goth	Others
NA	oŭi	avi	azi	ophei ophee			Lith. <i>nakti</i>
ID Ab	oŭi-bhiōm	avi-bhyām	D. <i>azibya</i>				Lith. I. <i>nakti-m̃</i> D. <i>nakti-m</i>
GL	oŭi-i-ous	avyoh		G. <i>ophioin</i>			
Plural							
N	oŭei-es	avyah avayah	azay-o	opheis	<i>turres</i>	<i>ansteis</i>	Lith. <i>nākyas</i>
A	oŭi-ns	avih	aziš	ophis [opheis]	<i>turris</i>	<i>anstins</i>	Lith. <i>naktis</i>
I	oŭi-bhis -mis	avibhih	azi-biš	—	—	—	Lith. <i>nakti-mi(s)</i>
D	oŭi-bhiōs	avibhyah	azibyō	ophist	<i>turribus</i>	<i>anstim</i>	Lith. <i>nakti-ms</i>
Ab	”	”	”	—	”	—	
G	oŭi-lōm	avīnām	azīnām	opheōn	<i>turrium</i>	<i>anstē</i>	Lith. <i>nakciū</i>
L	oŭi-su -si	avi-šu	azi-šu	—	—	—	Lith. <i>nakty-su</i>

§3. IE *u*-stem : IE* *sūnu* = OIA. *sūnu* (son), cf. Av. *bāzu* (arm), Gk. *pēkhu* (arm), Lat. *manu*, Goth. *sunu*, Lith. *sūnù*, OChSl. *synŭ*

Singu- lar	IE	OIA.	Av.	Gk.	Lat.	Goth.	Others
N	<i>sūnus</i>	<i>sūnus</i>	<i>bāzuš</i>	<i>pēkhus</i>	<i>manus</i>	<i>sunus</i>	Lith. <i>sūnūs</i>
A	<i>sūnu-m</i>	<i>sūnum</i>	<i>bāzu-m</i>	<i>pēkhun</i>	<i>manu-m</i>	<i>sunu</i>	Lith. <i>sūnu</i> _i
I	<i>sūnu-ā</i>	<i>sūnvā</i> <i>sūmunā</i>	<i>bāzu</i> <i>bāzuθ</i>	—	—	—	Lith. <i>sūnu-mi</i>
D	<i>sūneu-ai</i> <i>sūn(u)i -ai</i>	<i>sūnave</i>	<i>bāzavē</i> <i>bāzve</i>	<i>pēkheī</i>	<i>manu-ī</i>	<i>sunāu</i>	Lith. <i>sūnuī</i>
Ab	<i>sūnous, -eus</i> <i>sūn(u)uos</i>	<i>sūnos</i>	<i>bāzaoθ</i>	—	<i>manū-(d)</i>	—	Lith. <i>sūnaū-s</i>
G	<i>sūnous, -eus</i> <i>sūn(u)uos</i>	<i>sūnos</i>	<i>bāzao-s</i> <i>bāzaēus</i>	<i>pēkheō</i> -eō	<i>manū-s</i>	<i>sunāus</i>	Lith. <i>sūnaū-s</i>
L	<i>sūnēu</i> <i>sūneui</i>	<i>sūnāu</i> <i>sūnavi</i>	<i>bāžāu</i>	—	—	—	Lith. <i>sūniyē</i>
V	<i>sūnou, sūnu</i>	<i>sūno</i>	<i>bāzu</i>	<i>pēkhu</i>	[<i>manus</i>]	<i>sunu</i>	Lith. <i>sūnāu</i>

Dual	IE	OIA.	Av.	Gk.	Lat.	Goth.	Others
IDAL	sūnū	sūnū	bāzū bāzva	pēkhei	—	—	Lith. sūnu
NA	sūnū- bhiōm	sūnubhyām	D. bāzubyā	D. pēkheo in	—	—	Lith. I. sūnu-m D. sūnu-m
GL	sūn(u)u-ous	sūnvos	G. bāzvā L. bāzvō	G. "	—	—	
Plural							
N	sūneu-es	sūnavas	bāzavō	pekhees -eis	manūs	sunjus	Lith. sūnūs
A	sūnū-ns	sūnūn	bāzūs	pēkheas [pekheis]	manūs	sununs	Lith. sūnūs
I	sūnu-bhis	sūnubhis	bāzubis	—	—	—	Lith. sūnu-mi(s)
D	sūnu-bhiōm	sūnubhyas	bāzubyō	pekhesi	manu-bus	sunum	Lith. sūnū-ms
Ab	"	"	"	—	"	—	Lith. sūnū-ms
G	sūnuuōm	sūnūnām	bāzvqm	pēkheōn	manuum	suniwē	Lith. sūnū
L	sūnusu -sī	sūnuṣu	bāzuṣu	—	—	—	Lith. sūnu-su -sē

§4. IE ū-stem : IE **bhrū* = OIA. *bhrū* (brow), Gk. *ophrū* (brow),
cf. Lat. *sūs*, Lith. *žuvis* (fish).

Singular	IE	OIA	GK	Lat	Lith
N	<i>bhrū-s</i>	<i>bhrū-s</i>	<i>ophrū-s</i>	<i>sū-s</i>	<i>žuvis</i>
A	<i>bhrū-m</i> <i>bhrū-m</i>	<i>bhruvam</i>	<i>ophrū-n</i>	<i>su-em</i>	<i>žuv-i</i>
I	<i>bhrū-ā</i>	<i>bhruvā</i>	—	—	<i>žuv-i-mi</i>
D	<i>bhrū-ai</i>	<i>bhruv-e</i>	<i>ophrui</i>	<i>su-ī</i>	<i>žuv-i-ai</i>
Ab	<i>bhrū-es</i> -os	<i>bhruvas</i>	—	[<i>su-e</i>]	<i>žuvēs</i>
G	<i>bhrū-es</i> -os	<i>bhruvas</i>	<i>ophruos</i>	<i>su-is</i>	<i>žuvēs</i>
L	<i>bhrū-i</i>	<i>bhruvi</i>	—	—	
V	<i>bhrū</i>		—	<i>sūs</i>	<i>žuv-e</i>
Dual NA	<i>bhrū-e</i>	<i>bhruvā(u)</i>	<i>ophrue</i>		<i>žuv-i</i>
IDAb	<i>bhrū-bhīōm</i>	<i>bhrūbhyām</i>	—		I. <i>žuv-i-m</i>
GL	<i>bhrūous</i>	<i>bhruvos</i>	G. <i>ophruoin</i>		D. <i>žuv-i-m</i>
Plural N	<i>bhrū-es</i>	<i>bhruvas</i>	<i>ophru-es</i>	<i>su-ēs</i>	<i>žuv-ys</i>
A	<i>bhrū-ns</i>	<i>bhruvas</i>	<i>ophru-as</i> <i>ophrus</i>	<i>su-ēs</i>	<i>žuv-is</i>
I	<i>bhrūbhis</i>	<i>bhrū-bhis</i>	—		<i>žuv-i-mi(s)</i>
D	<i>bhrūbhīos</i>	<i>bhrūbhyas</i>	<i>ophrusi</i>	<i>sū-bus</i> <i>su-i-bus</i>	<i>žuv-i-ms</i>
Ab	"	"	—	<i>sū-i bus</i> <i>su-i-bus</i>	<i>žuv-i-ms</i>
G	<i>bhrūōm</i>	<i>bhruvām</i>	<i>ophruōn</i>	<i>su-um</i>	<i>žuv-ū</i>
L	<i>bhrū-su</i>	<i>bhrū-ṣu</i>	—	—	<i>žuv-y-su</i> -sē

§5. IE *ēu*-stem : IE. **nēus* = OIA. *nāus*, Gk. *nāus*/*nēas*, Lat. *navis*

Singular	IE	OIA	Gk	Lat
N	<i>nāu-s</i>	<i>nāu-s</i>	<i>nāu-s</i> <i>nēu-s</i>	<i>nāv-is</i>
A	<i>nāu-ṃ</i>	<i>nāv-am</i>	<i>nau-n</i> <i>nē-a</i>	<i>nāvem</i> <i>nāvim</i>
I	<i>nāu-ō</i>	<i>nāv-ā</i>	—	—
D	<i>nāu-ai</i>	<i>nāv-e</i>	<i>nēi</i>	<i>nāv-ī</i>
Ab	<i>nāu-es</i> <i>-os</i>	<i>nāv-as</i>	—	<i>nāv-ī(ā)</i>
G	<i>nāu-es</i> <i>-os</i>	<i>nāv-as</i>	<i>nēō-s</i> <i>ne-ōs</i>	<i>nāvis</i>
L	<i>nāu-i</i>	<i>nāv-i</i>	—	—
V				
Dual NA	<i>nāu-ē</i>	<i>nāvāu</i> <i>nāvā</i>	<i>nē-e</i>	
IDAB	<i>nāu-bhiṃ</i>	<i>nāubhyām</i>		
GL	<i>nāu-ou-s</i> <i>nāu-ou</i>	<i>nāvos</i>	<i>nēoin</i>	
Plural N	<i>nāu-es</i>	<i>nāvas</i>	<i>nē-es</i>	<i>nāv-ēs</i>
A	<i>nāu-ṃs</i>	<i>nāvas</i>	<i>nē-as</i> <i>naus</i>	<i>nāv-ēs</i>
I	<i>nāu-bhis</i> <i>-mis</i>	<i>nāubhis</i>	—	—
D	<i>nāu-bhiḥ</i>	<i>nāubhyas</i>	<i>nausi</i> <i>nēusi</i>	<i>nav-i-bhās</i>
Ab	—	—	—	—
G	<i>nāu-ōm</i>	<i>nāvām</i>	<i>nēōn</i> <i>neōn</i>	<i>nāv-i-ur</i>
L	<i>nāu-su, -si-s</i>	<i>nāusu</i>	—	—

§6. IE *ōu*-stem : IE **gʷōus* = OIA. *gāus*, Av. *gāu*, Gk. *bous*,
Lat. *bos*, OHG. *kuo*, Irish. *bō*.

Sing.	IE.	OIA.	Gk.	Lat.	Others
N	<i>gʷōu-s</i>	<i>gāus</i>	<i>bous</i> <i>bōs</i>	<i>bō-s</i>	OHG. <i>kuo</i> Irish. <i>bō</i>
A	<i>gʷōm</i>	<i>gām</i>	<i>boun</i> <i>bōn</i>	<i>bov-em</i>	OHG. <i>kuo</i> Irish. <i>boin-</i>
I	<i>gʷōu-ō</i>	<i>gav-ā</i>	—	—	Irish. <i>boin (?)</i>
D	<i>gʷōu-ai</i>	<i>gav-e</i>	<i>boi</i>	<i>bov-i</i>	Irish <i>boin</i>
Ab	<i>gʷōu-es</i> <i>gʷōu-s</i>	<i>gava-s</i> <i>gō-s</i>	—	<i>bovi(d)</i> [<i>bove</i>]	—
G	<i>gʷōu-es</i> <i>gʷōu-s</i>	<i>gavas</i> <i>gōs</i>	<i>bous</i> <i>bos-poros</i>	<i>bov-is</i>	OHG. <i>kuo</i> Irish. <i>bou</i> , <i>bō</i>
L	<i>gʷōu-i</i>	<i>gav-i</i>	—	—	—

Dual	IE	Skt.	Gk.	Lat.	Others
NA	<i>gʷōu-ē</i>	<i>gāvā</i> <i>gāvāu</i>	<i>bo-e</i>		Irish. <i>boin</i>
I DAB	<i>gʷōu-bhīōm</i>	<i>go-bhyām</i>			Irish. D. <i>buaib</i>
GL	<i>gʷōu-os</i>	<i>gav-os</i>	<i>bo-ois</i>		Irish. G. <i>bō</i>
Plural					OHG. <i>kuo-i</i> , <i>kuo</i>
N	<i>gʷōu-es</i>	<i>gāvas</i>	<i>bo-es</i>	<i>bov-ēs</i>	Irish. <i>bai</i>
A	<i>gʷōu-ns</i>	<i>gās</i> , <i>gāvas</i>	<i>bo-as</i> <i>bou-s</i> <i>bō</i>	<i>bov-ēs</i>	OHG. <i>kuoi</i> , <i>kuo</i> Irish. <i>bū</i>
I	<i>gʷōu-bhis</i>	<i>go-bhis</i>	—	—	Irish. <i>buaib</i>
D	<i>gʷōu-bhios</i>	<i>go-bhyas</i>	<i>bousi</i>	<i>bō-bus</i> <i>bū-bus</i>	
Ab	”	”	—	<i>bō-bus</i> <i>bū-bus</i>	
G	<i>gʷōu-ōm</i>	<i>gavām</i> <i>gōnām</i>	<i>bo-ōn</i>	<i>bov-om</i> <i>bo-um</i>	OHG. <i>kuo</i> Irish. <i>bōn</i>
L	<i>gʷōu-su</i>	<i>goṣu</i>	—	—	—

- §7. IE *n*-stem : IE **k̑on* = OIA. *švan*, Av. *spā*, Gk. *kuon*,
cf. Lat. *homo* (man), Goth. *guma* (man),
Lith. *szun* (dog).

Singular

- N. IE **k̑on* > OIA. *švā*, Av. *spā*, Gk. *kuon*, cf. Lat. *homō*,
Goth. *guma*, Lith. *szun*.
A. IE **k̑on-n̥* > OIA. *švānam*, Av. *spanəm*, Gk. *kuna*,
Lat. *homin*, -en, Goth. *guma*, Lith. *szun-i*.
I. IE **k̑un-ā* > OIA. *šunā*, Av. *sunā*, Lith. *szun-i-mi*.
D. IE **k̑un-ai* > OIA. *šun-e*, Av. *sūnei*, Gk. *kun-i*, Lat.
homi-ni, Goth. *guma*, Lith. *szun-ini*.
Ab. IE **k̑unes/os* > OIA. *šunah*, Av. *sunāθ*, Lat. *homin-e*
Lith. *szuñ-s*.
G. IE **k̑unes/os* > OIA. *šunah*, Av. *sūnō*, Gk. *kunos*, Lat.
homin-is, Goth. *gumins*, Lith. *szuñ-s*.
L. IE **k̑un-i* > OIA. *šuni*, cf. Av. *asn-i*, Lith. *szun-yyè*.
V. IE **k̑on* > OIA. *švan*, Gk. *kuon*, Goth. *guma*, Lith.
szune.

Dual

- NA. IE **k̑on-ē/au* > OIA. *švānā*, *švānāu*, Av. *span-a*,
Gk. *kun-e*, Lith. *szun-iū*.
IDAb. IE **k̑u-bh̥iōm* > OIA. *šva-bhyām*, Lith. D. *szun-i-m*.
GL. IE **k̑un-ōus* > OIA. *šunos*, Av. G. *sunā*, Gk. D. *kun-*
oin.

Plural

- N. IE **k̑on-es* > OIA. *švānas*, Av. *spānō*, Gk. *kunes*, Lat.
homin-es, Goth. *gomon-un*, Lith. *szūns*, *szūn-ys*.
A. IE **k̑un-ns* > OIA. *šunas*, Av. *spānō*, Gk. *kunas*, Lat.
homin-es, Goth. *gomon-un*, Lith. *szun-is*.
I. IE **k̑un-bhis* > OIA. *šva-bhis*, cf. Av. *dāma-biš/damebiš*,
Lith. *szun-i-mis*.
DAb. IE **k̑un-bh̥ias* > OIA. *šva-bhyas*, cf. Av. *dama-byō*,
damebyō, Gk. *kunesi(n)*, cf. Lat. *homīni-bus*,
Goth. *gomōm*, Lith. *szun-i-ms*.

- G. IE **kun-ōm* > OIA. *śunām*, Av. *sunaim*, Gk. *kun-ōn*,
Lat. *homin-um*, Goth. *gomono*, Lith. *szun-ūiū*.
L. IE **kun-su* > OIA. *śva-su*, cf. Av. *domo-hu*, Lith. *szun-*
ysu.
§8. IE *r*-stem : IE **mater* = OIA. *mātar* (< *mātr*), Av. *mātā*,
Gk. *mētēr*, Lat. *māter*, cf. Goth. *broþar*, Lith. *motė*,
OChSl. *mati*.

Singular

- N. IE **māter-s* > OIA. *mātā* (< **mātars*), Av. *mātā*, Gk.
mētēr, Dor. *mātēr*, Lat. *māter*, cf. Goth. *broþar*,
Lith. *motė*, *môte*, OChSl. *mati*.
A. IE **māter-ṃ* > OIA. *mātar-am*, Av. *mātarəm*, Gk.
mātera, Lat. *mātre*, cf. Goth. *broþar*, Lith.
moter-i, OChSl. *mater-i*.
I. IE **mātr-ā* > OIA. *mātrā*, Av. *māthrā*, Lith. *moter-i-mi*,
OChSl. *māter-ija*.
D. IE **mātr-ai* > OIA. *mātre*, Av. *māhre*, Gk. *mētri*, *mēteri*,
Lat. *matri*, cf. Goth. *broþar*, Lith. *moter-iai*,
OChSl. *mater-i*.
Ab. IE **mātr-es/os* > OIA. *mātuḥ*, Av. *māθraθ*, cf. Lat.
mātre, Lith. *moters*, OChSl. *mater-e*.
G. IE **mātres/os*, **mātrs* > OIA. *mātuḥ*, Av. *māθrō*, Gk.
mētros, Lat. *mātris*, cf. Goth. *brōþrs*, Lith.
moter-s, OChSl. *mater-e*.
L. IE **māter-i* > OIA. *mātari*, Av. *mātaiṛi*, Lith. *moter-*
vyė, OChSl. *mater-i*.
V. IE **māter* > OIA. *mātar*, Av. *mātarā*, Gk. *mēter*,
Lat. *māter*, Lith. *motė*, *môte*, OChSl. *mati*.

Dual

- NA. IE **māter-ē/āu* > OIA. *mātarāu*, Av. *mātara*, Gk.
mētere, Lith. *moter-i*, OChSl. *mater-i*.
IDAb. IE **mātr-bhīḍm* > OIA. *mātrbhīyām*, Av. D. *mātarābyā*,
Lith. I. *moter-i-m*, D. *moter-i-m*. OChSl. *mater-*
ima.

- GL. IE. **mātr-ous* > OIA. *mātros*, Av. G. *mātarā̃*, Gk. G. *mētēroin*, OChSl. G. *mater*, L. *mater-u*.

Plural

- N. IE **māter-es* > OIA. *mātaras*, Av. *mātarō*, Gk. *meteres*, cf. Goth. *brōþrjus*. Lith. *moter-s*, OChSl. [*mater-i*]
- A. IE **mātṛ-ns*/**māter-ns* > OIA. *mātṛs*, Av. *mātarō*, Gk. *mēteras*, cf. Goth. *brōþrun*s, Lith. *móter-is*, *moter-es*, OChSl. *mater-i*.
- I. IE **mātṛ-bhis*/-*mis* > OIA. *mātṛbhis*, Av. *materābiš*, Lith. *moter-i-mi(s)*, OChSl. *mater-i-mi*.
- D.Ab. IE **mātṛ-bhīas* > OIA. *mātṛbhīyas*, Av. *matarābyō*, Gk. *metrasī*, cf. Goth. *brōþrum*, Lith. *moter-i-ms*, OChSl. *mater-i-mū*.
- G. IE **mātrōm* > OIA. *mātrñām*, Av. *mādra m*, Gk. *metrōn*, cf. Goth. *brōþrē*, Lith. *moter-ū*, *moter-iū*, OChSl. *mater-ū*.
- L. IE **mātṛ-su* > OIA. *mātṛsu*, Lith. *moter-ysu*, -*yse*, OChSl. *mater-i-chū*.
- §9. IE *es/os*-stem: IE **menos*, **dusmenēs* = OIA. *manas*, *durmanāḥ*, Av. *mano*, *dušmanā̃*, Gk. *menos*, *dusmenēs*, cf. Lat. *genus*, cf. Lith. *debes* (cloud), cf. OChSl. *slovo* (word).

Singular

- N. IE **menos* > OIA. *manas*, Av. *manō*, *mane*, Gk. *menos*, cf. Lat. *genus*, cf. OChSl. *slovo*.
IE **dusmenēs* > OIA. *durmanāḥ*, Av. *dušmanā̃*, Gk. *dusmenēs*.
- A. IE. **dusmenem* > OIA. *durmanasam*, Av. *dušmanaghām*, Gk. *dusmenea*, cf. Lat. *generem*.
- I. IE **menes-ō/ā* > OIA. *manasā*, Av. *managhā*, cf. Lith. *debes-i-mi*, cf. OChSl. *sloves-i-mi*.
- D. IE **menes-ai* > OIA. *manase*, Av. *managhā*, Gk. *menet*, *mēni*, cf. Lat. *generi*, cf. Lith. *debes-īai*, cf. OChSl. *sloves-i*.

Ab. IE *mene-es/os > OIA. *manasas*, Av. *manahəθ*, cf. Lith. *debes-ės*, cf. OChSl. *sloves-e*.

G. IE *mene-es/os > OIA. *manasas*, Av. *manahō*, Gk. *meneos*, *meneous*, *mēnos*, cf. Lat. *generis*, cf. Lith. *debes-ės*, cf. OChSl. *sloves-e*.

L. IE *menes-i > OIA. *manasi*. Av. *manahi*, cf. Lith. *debes-yjė*, cf. OChSl. *sloves-e*.

Dual

NA. IE *menes-ī > OIA. *manasī*,

IE **dusmenēs-āu/e* > OIA. *durmanasāu*, Av. *dušmanahə*,

IDAb. IE **menes-bhīōm* > OIA. *manobhyām*, Av. D. *manebyo*, cf. Lith. I. *debes-i-m*, D. *debes-i-m*, cf. OChSl. ID. *sloves-i-ma*.

GL. IE **menes-ous* > OIA. *manasoh*.

Plural

N. IE **menōs-ōs* > OIA. *manāmsi*, Av. *manā*, *manahə*, Gk. *menea*, *menē*, cf. Lat. *genera*, *generes*, cf. OChSl. *sloves-a*.

IE **dusmenes-es* > OIA. *durmanasas*, Gk. *dusmeneas*.

A. IE **dusmenes-ns* > OIA. *durmanas*, Av. *dušmanahō*, Gk. *dusmeneas*, cf. Lat. *generēs*.

I. IE **menes-bhis* > OIA. *manobhis*, Av. *mane-biš*, cf. Lith. *debes-i-mi(s)*, cf. OChSl. *sloves-y*.

DAb. IE **menesbhios* > OIA. *manobhyas*, Av. *manēbyō*, Gk. *menessi*, cf. Lat. *generibus*, cf. Lith. *debes-i-ms*, cf. OChSl. *sloves-i-mū*.

G. IE **menes-ōm* > OIA. *manasām*, Av. *manaham*, Gk. *meneōn*, *mēnōn*, cf. Lat. *generum*, cf. Lith. *debes-ū*, cf. OChSl. *sloves-u*.

L. IE **menes-su* > OIA. *manahsu*, Av. *manahu*, cf. Lith. *debes-ysu*, *-ysė*, OChSl. *sloves-i-chū*.

CHAPTER EIGHT

Adjective

In IE adjective was declined like noun and followed the same grammatical categories of noun in addition to its power of denoting comparison. As IE is an inflected language, the adjective could precede or follow the noun. In general, the formative suffixes of adjective are the same with noun, except the suffixes for comparison. The adjectives were originally nouns, but they were used as adjectives by placing them before the noun. For example, in the Greek word *hrododáktulos ēōs* (cf. Vedic *gāvo'ruṇyas tathosām*) meaning 'rosy-fingered Dawn', the original meaning of *hrododáktulos* is 'a man with rosy fingers', so also *khrusothronos* (lit. throne with gold = golden throne), *euplokamos ēōs* (lit. 'Dawn with lovely locks' = fair-tressed Dawn).

The IE had several suffixes to express the comparative and superlative degrees of adjective. These suffixes are—

Comparative		Superlative
(1) * <i>ies</i> /* <i>ios</i> , * <i>is</i>	—	* <i>is-to</i> , * <i>to</i>
(2) * <i>i-ies</i> /* <i>i-ios</i>	—	* <i>is-to</i> , * <i>to</i>
(3) * <i>ero</i>	—	... ..
(4) * <i>tero</i>	—	* <i>temo</i> /* <i>tḡmo</i>
(5)	—	* <i>mo</i> /* <i>ḡmo</i>

§1. The Comparative Degree

Originally, the IE had **ies*, **ios*, and **is* (weak grade of **ies*) suffixes for the comparative degree. In Sanskrit, the simple suffix **ies* (=Skt. -yas) does not generally occur, except in a few forms like *sana* (old) > *sanyas* (older), Lat. *senior*. In Avestan, of course, **ies* (Av. *yah*) is the usual form ; e.g., *reng-yah* (lighter).

The weak grade form **-is* normally occurs in Latin and

Gothic adverbial forms ; e.g., Lat. *magis* (greatly), Goth. *mins* (less) < **minniz*, *walrs* (worse) < **wirsiz*.

In Sanskrit, the suffix which really occurs is *-i-yas* coming from IE **ies* with the addition of *i* making it **i-ies*/**i-ios* which was primarily added to the form ending in *i* which ultimately gave rise to the form *i-ies*. In Sanskrit *i* is generalized as *-i-yas*, whereas in Greek *i* was preserved. For example, OIA. *svādu* (sweet) > *svādīyas* (sweeter), Gk. *hēdō* (< **sFādīoas*, **sFādīioses*), Goth. *sūt-iza* (sweeter) ; OIA. *laghu* > *laghīyas*, Gk. *elakhis* > *elāssōn* (smaller).

The other comparative suffixes in IE were *-*ero* and *-*tero* which were originally added to words relating to place and time, and to some pronominal forms. The suffix *-*ero* was not preserved in any other languages, except in a few forms in Sanskrit, Greek, Latin and Gothic. For example, IE **ndh-eros* > OIA. *adharaḥ* (lower), Lat. *inferus*, OHG. *undaro* ; IE **entero* > OIA. *antara* (inner), Gk. *enteron*, Lat. *interior*. So also OIA. *uparaḥ* (upper), Lat. *superus*. IE. **q*otero* > OIA. *katarah*, Gk. *póteros*, Goth. *hvaþar* (which of two), Lith. *katrà-s*.

The IE suffix *-*tero* is very much productive in Sanskrit and Greek, but not in Latin and Germanic languages ; e.g., Skt. *cārutarah* (dearer), *śuci-tarah* (purer), *tavastarah* (stronger), *bhagavat-tarah* (more blessed), *ut-tara* (higher), Gk. *glukuteros* (sweeter), *khariesteros* (more graceful). In Skt. *āmā-tarah* and Gk. *ōmō-teros*, the comparative suffix is used with the original meaning of *āma* and *ōmo* meaning 'raw'.

The suffix *tara* is used in a few substantives like *aśva-tara* (mule, lit. more (like a) horse than an ass), *vatsa-tara* (weaned calf, lit. more than a calf) in which the meaning of the suffix is obscure. [VG. §213].

§2. The Superlative Degree

The IE superlative suffixes are *-*to*, *-*tis-to*, **mo₁-*mmo₁*, **temo₁*tmmo₁*.

Gothic adverbial forms ; e.g., Lat. *magis* (greatly), Goth. *mins* (less) < **minniz*, *walrs* (worse) < **wirsiz*.

In Sanskrit, the suffix which really occurs is *-i-yas* coming from IE **ies* with the addition of *i* making it **i-ies*/**i-ios* which was primarily added to the form ending in *i* which ultimately gave rise to the form *i-ies*. In Sanskrit *i* is generalized as *-i-yas*, whereas in Greek *i* was preserved. For example, OIA. *svādu* (sweet) > *svādīyas* (sweeter), Gk. *hēdō* (< **sFādīoas*, **sFādīioses*), Goth. *sūt-iza* (sweeter) ; OIA. *laghu* > *laghīyas*, Gk. *elakhis* > *elāssōn* (smaller).

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§2. The Superlative Degree

The IE superlative suffixes are *-*to*, *-*tis-to*, **mo|-*mmo*, **temo|*tmmo*.

The *to and *mo/*ṛmo suffixes are found in numerals to express position in a numerical series. The *mo/*ṛmo suffix is unproductive in Greek, and in Sanskrit, Latin, and Germanic languages, it is also less productive. For example,

IE *seks-tos > OIA. *ṣaṣṭhas*, Gk. *hektos*, Lat. *sextus*, Goth. *saihsta*.

IE *dekṃ-tos > Gk. *dékatos*, Goth. *taihunda*, Lith. *deszimtas*, OChSl. *desŕtŭ*.

IE *septṃ-mos > OIA. *saptamaḥ*, Gk. *hēbdomos*, Lat. *septimus*, Lith. *sėkma-s*.

IE *dekṃ-mos > OIA. *daśamaḥ*, Lat. *decimus*.

IE *up-ṛmos > OIA. *upamaḥ* (uppermost), Lat. *summus* (<*(s) up-mos), cf. Goth. *aúhuman*.

The other examples with *mo are OIA. *adha-maḥ* (lowest), OIA. *pra(tha)ma* (first) (for **pratama*), Lat. *primus*, Goth. *fruma* (first).

The superlative suffix *is-to is made up of *-is, the weak grade of *ies* (cf. Lat. *magis*) and *-to used for ordinal numbers (cf. Gk. *hektos*). This is very much productive in Sanskrit and Greek, but lost in Latin. In Gothic this is also not very much productive. For example, OIA. *mahiṣṭhaḥ*, Gk. *mégistos*; OIA. *svādiṣṭhaḥ*, Gk. *hēdistos*, Goth. *sūt-ists*, NE. *sweetest*.

The suffix *temo or *ṛtmo is largely found in Sanskrit and Greek and becomes the regular superlative suffix -tama of those adjectives which are formed from -tara in comparative degree; e.g., Skt. *cārutaraḥ-cārutamaḥ*, *paṭutaraḥ-paṭutamaḥ*.

The suffix *ṛtmo became *tamo in Greek and then became tato in the prehistoric period of Greek under the influence of is-to; e.g., Gk. *dekatos* (tenth), Sanskrit *antamaḥ* (next), *uttamaḥ* (lit. highest, best), *puru-tamaḥ* (very many), *rathī-tama* (best charioteer), *madhumat-tama* (sweetest) are examples of this suffix. It is also used in Sanskrit ordinals, e.g., *śata-tama* (hundredth), *sahasra-tama* (thousandth), etc.

Sometimes tara and tama are added to the verbal forms to denote comparison with the addition of -ām to make it

adverb (Pā. *tiṅśca* // V. 3. 56 and *kiṃ-et-tiṅ-avyaya-ghād-āmv-adravya-prakarṣe* // Pā. V. 4. 11) ; e.g., *pacati-tarām—pacati-tamām*.

§3. Double superlative : It is seen in language that when further excellence is intended to emphasize the situation, then double suffixes are added to the word. For example, in Sanskrit, we have the use of *śreṣṭhatama* as in *devo vah savitā prāpayatu śreṣṭhatamāya karmaṇe* (TS. 1.1.1.1.), *yudhiṣṭhirah śreṣṭhatamah kurūṇām*. cf. Shakespeare—

“This was the *most unkindest* cut of all.” (Julius Caesar, Act III. Sc. 2).

These double suffixes for comparison also occur in Greek and Gothic to produce effective situation, e.g., Gk. *kunterōteros* (comp.), *prōtistos* (superlative), Goth. *frumists*.

§4. Numerals

The IE people had the decimal system for counting. They had words for one to hundred, or even more. From Sanskrit, Greek, Latin, Gothic and other languages, it appears that the counting system of IE people was the same, and they had all inherited this numeral system from IE. The series of the numerals is reconstructed on the decimal system of reckoning of the fingers, the numerals one to ten being the foundation of the rest series, either by compound or derivation. Some say that though ‘the system is obviously the decimals based originally on the counting of the fingers, there are some traces of the intrusion of a sexagesimal system with its grouping by sixties or the sub-ordinate dozens or scores.’ [CGGL § 312].

The numerals are of the following kinds :

1. Cardinals,
2. Ordinals,
3. Multiplicative (including 4. Collective),
5. Distributive (only in Latin),
6. Numeral Adverbs (indeclinables).

1. Cardinals

§1. Inflection of the Cardinals :

In IE the cardinals from one to four were only regularly inflected, although Sanskrit inflects from five to nineteen also. The numbers from one to four are also inflected in three genders, and those from five to nineteen are defective and appear originally to have been inflected. But from eleven to fourteen, the units were originally declined. The decades and the words for hundred and thousand were also originally declined.

§2. Inflection of Sanskrit Cardinals :

The inflections of Sanskrit cardinals are in many respects peculiar, and therefore may be divided into three groups.

The first group comprises the first four numerals. These are the only cardinals, which like other adjectives, distinguish the genders as well as the numbers as far as the sense permits in both Sanskrit and Greek.

eka (one) is singular, but can also be used in plural in the sense of some, e.g., *eke vadanti*—some say.

dvā (*dvi*) two—is always dual and is inflected in dual only.

tri (*traya*) and *catur* (four) are always inflected in the plural.

The second group comprises the cardinals from five to nineteen and they are all adjectives. But they do not distinguish gender, and take no ending in the nom. and acc. They are always plural, and their declensions are the same in all genders.

The third group of cardinals, comprising the numbers from 'twenty' onwards, are substantives inflected regularly according to the declension of the final stem. This group of numerals is singular and is always used in singular only, though they are the adjectives of plural nouns (cf. *viṃśatyāder anāvṛttāu bahutve'pi ekavacanam*—Kramadīśvara). But they may be used in the plural in the sense of repetition, e.g., *lokānām sahasrāni*.

§3. History of Numerals :

1. One : The IE had several words for one. They, of course, differ slightly in meaning to express the idea of one. In IE, two different roots appear as the basis of one. They are IE **oi-* which had the meaning 'one' or 'alone', and the other is IE *sem* (*sm̥*) meaning also 'one' or together with one.'

The IE root **oi-* is used with various suffixes in different IE languages.

- (a) IE **oi-q*o-s* > OIA. *ekaḥ*. This is the only form which exactly corresponds to the Aryan *aika* found in Hittite document—*aika-vartana*.
- (b) IE **oi-uo-s* > Av. *aēva*, OP. *aiva*, Gk. *oios* (alone, by oneself), Cypr. *oiFos* (alone).
- (c) IE **oi-no-s* > Gk. *oinós*, *oiné*, *oine* (the ace on dice), Old Lat. *oinos*, *oenus*, LLat. *ūnus*, Goth. *ains*, OE. *ān* (one), Eng. *an* (one), OIrish. *óin*.

The base of other group is **sem/*sm̥/*sm*. For the various words with *s-m*, these four bases are :

- (a) IE **sem-s* > Attic, Ion. *heis*, Dor. *hēs*, Cret. *ēns*, Gk. *hén* (neuter), Gk. (gen) *henós* (<**homos*), Gk. *hemí* (cf. Lat. *sem-per*), Toch. *sas* (A), *seme* (B).
- (b) IE **som-s* > OIA. *sama*, Gk. *homós* (one and the same), Goth. *sama* (same).
- (c) IE **sm̥-s* > OIA. *sa-kṛt* (once), Av. *ha-kərət*, Gk. *háma*, *há-pax*, *há-plous*, Dor. *há-teros*, Gk. *he-katon* (<**ha-katon*), Att. *hè-teros* (<**há-teros*), Lat. *sem-el*, *simul*.
- (d) IE **sm-* > Gk. *mía* (<**smia* for fem. nom. sg.), cf. Gk. *mōnux* (<**smōnux*, having one hoof).

Two : For two IE had **duō(u)*, **duuō(u)*, **dui-* (in compound).

IE **duō(u)/duuō(u)* > OIA. *dvā(u)*, *duvāu* (vedic), *dve* (neuter), Gk. *duō* (<**duFō* = OIA. *duvāu*), besides **dFō* = OIA. *dvā* in Gk. *dō-deka*.

IE **duwoi* > OIA. *duvé* (vedic), Gk. **duFoi* > *duó* (when the next word begins with a vowel), Lat. *duo*, Sla. *dvā* (neuter *dvé* = OIA. *dvé*), Goth. *twai*, OE. *twā* (= OIA. *dve*).

In compound we have an *i* suffix, after the analogy of **tri*; e.g.,

IE **dui*/**di* > OIA. *dvi-pád*, Gk. *dí-pous*, Lat. *bi-pēs*, OE. *twi-fēte*, Lat. also *du-centī*, Umbr. *du-pla*, *du-pursus*.

Three: For three also IE had **tri*, **trejes*, **trins* bases.

IE **tri* > OIA. *trī* (vedic), Gk. *tria*, Lat. *tria*, Goth. *þrija*.

IE **trejes* (nom. pl.) > OIA. *trayas*, Gk. *treis* (Att. nom.), Lat. *trēs*, Cret. *trées*.

IE **trins* (acc.) > Ion. Dor. Boebt. *trīs*, Goth. *þrimis*.

IE **triñōm* (gen.) > OIA. *trayām* (vedic) for *trayāṇam*, Av. *θrayam*, Gk. *triñōm*, Lat. *trium*, OIA. *triṣū*, Gk. *trisi* (dat), Lith. *trisė*.

In compound the IE base is **tri*-

IE **tri* > OIA. *tri-pád*, Gk. *tri-pous*, Lat. *tri-pēs*, OE. *þri-fēte* (three-footed).

Four: The IE word for four had various forms depending on the grades of ablaut **q^uetuor*, **q^uetur-*, **q^uetuṛ-*.

IE **q^uetuor-es* (mas. nom.) > OIA. *catvārah*, Dor. *tētores*, Att. *tettāres*, Hom. *téssares*, Lat. *quattuor*, Goth. *fidwōr*.

IE **q^uetur-ns* (mas. acc.) > OIA. *caturah*, Hom. *plisuras*, Att. *tettaras*.

IE **q^uetuor-ə* (nom. acc. neut.) > OIA. *catvāri*, Att. *tettara*, Hom. *téssara*, Boet. *þéttara*.

IE **q^ueturōm* (gen.) > OIA. *caturñām*, Att. *tettarōn*, Lesb. *pisúrōn*, Att. *tettarōn*.

IE **q^uetuṛsu* (loc.) > OIA. *caturṣu*, Att. *tettarsi*.

In compounds the IE form is **q^uetur-*, **q^ueíur-*, **q^uetru*.

IE **q^uetur* > OIA. *catur* in *caturdaśa*.

IE **q^uetuṛ* > Gk. *tetra* in *tetra-zugos*.

IE **q^uetru* > Av. *čathru-*, Lat. *quadru-*.

2. From 'five' to 'nineteen' the cardinals, though used adjectivally, do not distinguish gender; i.e., the same forms are used in all the genders, and in the nominative and

accusative, they do not take any endings. These numerals are given below :

IE **penq̥e* > OIA. *pañca*, Gk. *pente*, Aeol. *pempe*, Lat. *quinque*, Goth. *fimf*, OE. *fif*, Eng. *five*, OIr. *cōic*.

IE **seks* > OIA. *ṣaṭ* (< *ṣaṣ*), Gk. *hex* (**sFēx*), Lat. *sex*, Goth. *saḥs*, OIr. *sē*.

IE **septm̥/n̥* > OIA. *sapta*, Gk. *hepta*, Lat. *septem*, Goth. *sibun*, OIr. *secht*.

IE **oktō(u)* > OIA. *aṣṭā(u)*, Gk. *oktō*, Lat. *octō*, Goth. *ahtāu*.

IE **neun̥* > OIA. *nava*, Gk. *ennea*, Lat. *novem*, Goth. *niun*.

IE **dek̥m̥* > OIA. *daśa*, Gk. *deka*, Lat. *decem*, Goth. *taihun*, OIr. *deich*.

3. From eleven to nineteen the units originally preceded the decimal unit sometimes with lengthening the final vowel of the unit. In Greek and Latin, the word *kai* and *et* meaning 'and' are used respectively along with the unit. In Greek and Latin the units could follow the decade.

OIA. *ekā-daśa*, Gk. *en-deka*, Lat. *ūn-decim* (< **oinom-decem*), Goth. *ainlif*.

OIA. *dvā-daśa*, Gk. *dō-deka*, Lat. *duo-decim*, Goth. *twalif*.

OIA. *trayodaśa*, Gk. *treis/tria kai deka*, Lat. *trē-decim* (< **tres-decim*).

OIA. *caturdaśa*, Gk. *tessares kai deka*, Lat. *quattuordecim*, Goth. *fidwōrtaihun*.

OIA. *pañcadaśa*, Gk. *pente kai deka*, Lat. *quīndecim*, Goth. *fimftaihun*.

OIA. *ṣoḍaśa*, Gk. *hek kai deka*, Lat. *sēdecim*.

OIA. *saptadaśa*, Gk. *hepta kai deka*, Lat. *septendecim*.

OIA. *aṣṭādaśa*, Gk. *oktō kai deka*, Lat. *duodē viginti*.

OIA. *ūna-vimśati*, Gk. *ennea kai deka*, Lat. *ūndē viginti*.

4. From twenty onwards the style of counting is different for the next decades. The word for twenty in IE is **ui-k̥mti* (= lit. ten decades) which is in fact a dual form. **k̥omt* has come from **dkomt* (syncopated from *dek̥m̥*) and is related to **dek̥m̥* (ten). The regular forms will be :

IE **ui-k̥mti* > OIA. *vimśati*, Dor. Boeot. *Fi-kati*, Att. Ion. *ei-kosi*, Lat. *vi-ginti*, OIr. *fiche*, Goth. *twārtigjus*.

IE **tri-komtā* > OIA. *triṃśat*, Att. *tria-konta*, Ion. *triē-konta*, Lat. *tri-gintā*, Goth. *þreistigjus*.

IE **q²etw-komtā* > OIA. *catvāriṃśat*, Gk. *tetri-konta*, Lat. *quadra-gintā*, Goth. *fidwōrtigjus*.

IE **penq²ē-komtā* > OIA. *pañcāśat*, Gk. *pentē-konta*, Lat. *quinqua-gintā*, Goth. *fimstigjus*.

IE **seks-* > OIA. *ṣaṣṭi* (a different formation), but Greek and Latin have the regular forms, e.g., Gk. *hexē-konta*, Lat. *sexā-gintā*, Goth. *saihstigjus*.

IE **septm-* > OIA. *saptatiḥ*, Gk. *hebdomē-kontā*, Lat. *septuāgintā*, Goth. *sibuntēhund*.

IE **okt-* > OIA. *aṣṭiḥ*, Gk. *ogdo-konta*, Lat. *octō-gintā*, Goth. *ahhtautēhund*.

IE **neun-* > OIA. *navatiḥ*, Gk. *ennē konta*, *enenē-konta* (Hom.), Lat. *nonā-gintā*, Goth. *niuntēhund*.

IE **kṃtam* > OIA. *śatam*, Gk. *he-katon*, Lat. *centum*, Goth. *tathuntēhund*.

5. It is difficult to give a common word for thousand. IE languages differ in this respect. For example,

IE **gheslom* > OIA. (*sa*)-*hasram*, (one thousand), Av. *ha-zaṇha*, Gk. **kheslon*. It became adjectival as **kheslioi* > OIA. *sa-hasrīya*, Ion. Boeot. *kheiliōi*, Doric. *khēlioi*, Att. *khīlioi*.

The other form is Lat. *mille*, OIr. *mīle*.

The Eng. thousand has come from Goth. fem. *þūsundi*, Lith. mas. *tūkstantis*, OSlav. fem. *tysęsta*.

6. The numbers expressing beyond thousand and its multiples are *a-yūta* (10,000); *ni-yūta* (100,000); *pra-yūta* (1,000,000); *ārbuda* (10,000,000); *nyarbuda* (100,000,000). In the TS (VII. 2.11-20), the numerals after that are given as *samudrā*, *mādhya*, *ānta*, *parārdha*. [VG § 405d]. In the *Līlāvati*, the numerals from 1 to 18 are given and these have no parallels in any other IE languages. The verse is—

1	2	3	4	5	6	7	8
eka-daśa-śata-sahasrāyuta-lakṣa-prayuta-koṭayaḥ kramaśaḥ |							
9	10	11	12	13	14		
arbudam abjam kharva-nikharva-mahāpadma-śaṅkhavas tasmāt ||							
15	16	17	18				
jaladhiś cāntyaṃ madhyam parārdham iti daśaguṇottarāḥ saṅjāḥ |							
saṅkhyāyāḥ sthānānāṃ vyavahārārthaṃ kṛtāḥ pūrvāḥ ||							

2. Ordinals

The ordinals, with few exceptions, are formed from the cardinals with the superlative suffixes like, *-*mo*, *-*to* and **temo*/**tm̐mo*; e.g., OIA. *pra-t(h)amas*, Gk. *prō-tos*, Lat. *pri-mus*, Goth. *fru-ma*. Actually Gk. *prō-tos*, Dor. *prātos* (<**prōFatos*) is related to Skt. *pūrvah* or *pūrvyah* (weak grade), Lith. *pirmas*, where *pra* means 'before', 'foremost', and this position is retained in Lat. and Gothic. Homeric *prōtistos* and Goth. *fru-mists* are double superlative.

Second, third and fourth are formed from different suffixes like (*t̐iya* and *tha*; e.g., OIA. *dvi-t̐iya*, Gk. *deuteros*, cf. Lat. *secundus* (cf. Lat. *sequor*); OIA. *ṭṭi-ya*, Gk. *tri-tos*, Lat. *tertius*; OIA. *catur-tha*, cf. Gk. *tetratos*, Lat. *quārtus*, Lith. *ket-wirtas*, IE **q̑̌et̑̌ur-tos*. We have *ṣaṣ-tha* and in RV. *sapta-tha* beside *sapta-ma* from the suffix *-tha*.

From 'fifth' to 'tenth' with the exception of sixth (*ṣaṣ-tha*) are formed with *-ma*; e.g. OIA. *pañca-ma*. Vedic *pañcatha* is connected with Gk. *pemptos*, Lat. *quintus*, Lith. *peñktas*, OE. *fifsta*, Eng. *fifth* from IE. **pēnq̑̌tos*.

IE **s(y)ektos* > OIA. *ṣaṣtha*, Gk. *hektos*, Lat. *sextus*, Goth. *saihsta*.

IE **septm̐-mos* > OIA. *saptamaḥ*, Gk. *hebdomos*, (<**sebdm̐os*), Lat. *septimus*.

IE **okto-mos* > OIA. *aṣṭa-maḥ*, Gk. *ogdoos*.

IE **en̐n̐-tos*/*ne̐n̐-os* > OIA. *navamaḥ* (*m* from *daṣamaḥ*), Gk. *enatos*, Lat. *nōnus*.

IE **dek̑̌m̐-tos*/*dek̑̌m̐-os* > OIA. *daṣamaḥ*, Gk. *dekatos*, Lat. *decimus*, Goth. *talhunda*.

The ordinals from 'eleventh' to 'nineteenth' are formed in the same way as those of the cardinals except the accent. The ordinals are accented on the final syllable and are declined like the ordinary nominal *a*-stem; e.g., *ekādaśā*-, *dvā-daśā-trayo-daśā*-, *catur-daśā*-, *pañca-daśā*-, etc., whereas cardinals are accented like, *ékādaśa*-, *dvā-daśa*-, *trāyodaśa*-, etc.

The ordinals from twentieth to ninetieth are also formed from the cardinals ending in *a*; e.g., *eka-viṃśā*-, *catvāriṃśā*-, *eka-ṣaṣṭā*; etc.

The ordinals for hundred and thousand are formed with the superlative suffix—*tama* ; e.g., *śata-tamā*, *sahasra-tamā*.

3. Multiplicative

The multiplicative suffixes are formed differently in different languages, particularly in Sanskrit, Greek and Latin. Except twice and thrice where OIA. *dviḥ*, Gk. *dis*, Lat. *bis* from IE **dui-s*, and OIA. *triḥ*, Gk. *tris*, Lat. *ter* from IE **tris*, they had different formations.

4. Collective

In OIA the multiplicative suffixes in a collective sense, are formed with *-a*, *-ya*, *-taya*, *-vaya* ; e.g., *tray-ā* (threefold) *dva-yā* (twofold), *dāśa-taya* (tenfold), *cāturvaya* (fourfold).

5. Numeral Adverbs

Multiplicative adverbs are formed with *-kṛt*, *-s*, *kṛtvas*, *dhā* and *śas* suffixes.

With *kṛt* suffix, the form *sa-kṛt*, Lat. *sem-el*, Gk. *ha-pax*, originally meant 'one making', then 'once', is only found.

With *s*-suffix are formed the words like *dvi-s* (twice), *tri-s* (thrice), *catu-s* (<**catur-s*) (four times), Av. *čaθru-š*.

The *kṛtvas* 'time' suffix is added with the rest of the cardinals ; e.g., OIA. *pañcakṛtvas*, Gk. *pentakis*, Lat. *quinquies* ; *aṣṭa-kṛtvas* (eight times), *bhūri-kṛtvas* (many times).

The suffix *-dhā* is added to the cardinals to express the numeral adverbs of manner ; e.g., *dvi-dhā*, *tri-dhā*, *caturdhā*, *pañcadhā*, *ṣoḍhā* (<**ṣaṣ-dhā*) etc.

The suffix *-śas* is added to the cardinals to express adverbs of manner or measure used distributively ; e.g., *ekasas* (one by one), *śataśas* (by hundred).

6. Distributive

Except Latin, the distributive adjectives are not available in Greek and Sanskrit or in any other IE languages. For distributive word when Gk. will use *hēkastōi duo* (two for each), Latin will say *unicuique binī* (two together for each).

CHAPTER NINE

Pronouns

Pronouns in IE had numerous forms, and they also developed numerously in different IE languages. Hence it is difficult to give a common IE form for all the pronouns. However some of the common forms as are available in IE languages will be of great help to understand the origin of OIA pronouns.

Like noun the pronoun is also inflected and follows the gender, number and cases of the noun. But pronoun differs in certain respects from the noun. First, the pronoun cannot be reduced to a shortened form. Secondly, in some cases, the inflections are different and this distinguishes between a noun and a pronoun, e.g., Skt. *pūrvāya* (n) and *pūrvasmāi* (p) IE **toi*/**tei* > OIA. *té*, Goth. *þai*, IE. **meġh-i-om* > OIA. *māhyam*, but noun has *pad-ē*. Thirdly, pronouns are essentially *deictic*. That is to say, they show or point out directly, they denote a specific individual for emphasis; e.g., *eṣa janaḥ*, 'this man', lit. 'this very man.'

In the following are given the schemata of OIA pronouns as evolved from IE and independently in OIA.

I. Personal Pronouns : bases—

1. First person—*asmad*, (*mad*)
2. Second person—*yuṣmad*, (*tvad*)
3. Third person—*tad*, *bhavat*

II. Demonstrative Pronouns : bases—

1. *tad*, *tyad*, *tva*—that, or he, she, it (who or which has been mentioned);
2. *etad*, *e-na*—this, (who or which is very near to the speaker);
3. *idam*, [*ama*, *ava*]—this (referring to what is near);
4. *adas*—that (referring to what is remote).

III. *The Relative Pronoun* : base—

1. *yad*—who, which, what.

IV. *The Interrogative Pronoun* : bases—

1. *kim*—who ? which ? what ?
katara—who or which of two ?
katama—who or which of many ?

V. *Indefinite Pronouns* : bases—

- | | |
|------------------------|--|
| 1. <i>kaścīt</i> | 4. <i>katicit</i> —some |
| <i>kim + cit/svīt</i> | 5. <i>kadācit</i> —sometime |
| —some one, | 6. <i>kadācana</i> —sometime |
| something | 7. <i>kadāpi</i> —any time. |
| 2. <i>kaścāna</i> | 8. <i>sama, sima</i> —any, every, all. |
| <i>kim + cana</i> — | |
| anyone, anything | |
| 3. <i>ko'pi</i> | |
| <i>kim + api</i> —some | |
| one, anything. | |

VI. *Reflexive or Intensive Pronouns* : bases—

1. *ātman*—self, soul
2. *svayam*—self
3. *tanū*—body, self.
4. *nija*—own, self.

VII. *Reciprocal Pronouns* : bases—

1. *anyonya*—each other, one another
2. *itaretara*—one another
3. *paraspara*—mutual.

VIII. Possessive Pronouns : bases—

Singular	Plural
<i>madiya</i> — <i>madiyā</i> = my, mine <i>māmaka</i> — <i>māmikā</i> <i>māmakīna</i> — <i>māmakīnā</i>	<i>asmadiya</i> — <i>asmadiyā</i> = our, ours <i>āsmāka</i> — <i>āsmākī</i> <i>āsmākīna</i> — <i>āsmākīnā</i>
<i>tvadiya</i> — <i>tvadiyā</i> = thy, thine <i>tāvaka</i> — <i>tāvakī</i> <i>tāvakīna</i> — <i>tāvakīnā</i>	<i>yuṣmadiya</i> — <i>yuṣmadiyā</i> = your, yours <i>yāuṣmāka</i> — <i>yāuṣmākī</i> <i>yāuṣmākīna</i> — <i>yāuṣmākīnā</i>
<i>tadiya</i> — <i>tadiyā</i> = his, her, hers its, their, theirs <i>etadiya</i> — <i>etadiyā</i> = belonging to this (person or thing) <i>yadiya</i> — <i>yadiyā</i> = belonging to whom or which	
<i>sva</i> — <i>svā</i> = one's own <i>sviya</i> — <i>sviyā</i> <i>svakiya</i> — <i>svakiyā</i>	

IX. Correlative Pronouns : bases

1. <i>tad</i>	<i>tāvat</i> (so much)	<i>tati</i> (so many)	<i>tā-dṛś(a)/kṣa</i> such like
2. <i>etad</i>	<i>etāvat</i> (so much)		<i>etā-dṛś(a)/kṣa</i> such like
3. <i>idam</i>	<i>iyat</i> (so much)		<i>ī-dṛś(a)/kṣa</i> such like
4. <i>yad</i>	<i>yāvat</i> (as much)	<i>yati</i> (as many)	<i>yā-dṛś(a)/kṣa</i> what like
5. <i>kim</i>	<i>kiyat</i> (how much?)	<i>kati</i> (how many ?)	<i>kī-dṛś(a)/kṣa</i> what like ?

X. Pronominal Adverbs : bases—

Bases	<i>tad</i>	<i>idam = a</i>	<i>yad</i>	<i>kim = ku/ka</i>
1.	<i>tatas</i> (thence, there- upon, therefore)	<i>itas</i> } hence, <i>atas</i> } therefore	<i>yatos</i> — whence, since, because	<i>kutas</i> — whence ? why ? how ?
2.	<i>tatra</i> —there	<i>atra</i> 'here'	<i>yatra</i> — where	<i>kutra</i> } where ? <i>kuha</i> } <i>kva</i>
3.	<i>tathā</i> —thus	<i>ittham</i> —thus	<i>yathā</i> —as	<i>katham</i> — how ?
4.	<i>tadā</i> —then, at <i>tadānim</i> —that time	<i>idānim</i> —now	<i>yadā</i> — when	<i>kadā</i> —when ?
5.	<i>tarhi</i> —then, therefore	[<i>etarhi</i>] at this time	<i>yarhi</i> — when	<i>karhi</i> —when ?

XI. Pronominal adjectives : bases—

- | | |
|----------------------------------|--------------------------------------|
| 1. <i>anya</i> —'another' | 4. <i>katara</i> —who/which of two, |
| <i>anyatara</i> —'either of two' | <i>katama</i> —who/which of many, |
| <i>anyatama</i> —'one of many' | 5. <i>yatara</i> —who/which of two, |
| 2. <i>itara</i> —'other' | <i>yatama</i> —who/which of many, |
| 3. <i>ekatara</i> —'one of two' | 6. <i>tatara</i> —that/which of two, |
| <i>ekatama</i> —'one of many' | <i>tatama</i> —that/which of many. |

XII. Miscellaneous Pronouns :

- | | |
|--------------------------------------|-------------------------------------|
| 1. <i>sarva</i> —every, all | 11. <i>uttara</i> —superior, |
| 2. <i>viśva</i> —every, all | northern, subsequent |
| 3. <i>ubha</i> —both | 12. <i>dakṣiṇa</i> —right, southern |
| 4. <i>ubhaya</i> —both | 13. <i>para</i> —subsequent |
| 5. <i>nema</i> —half | 14. <i>pūrva</i> —prior, eastern |
| 6. <i>ardha</i> —half | 15. <i>alpa</i> —little, few |
| 7. <i>adhara</i> —lower, inferior | 16. <i>katipaya</i> —some |
| 8. <i>antara</i> —outer | 17. <i>carama</i> —last. |
| 9. <i>apara</i> —other | |
| 10. <i>avara</i> —posterior, western | |

I. Personal Pronouns :

1. First personal pronoun

The first personal pronoun is not distinguished by gender and is made from different stems, such as, *ah-*, *mā-*, *mah-*, *va*, *na*, and *asma*. Some of the stems do not take any inflections, and some take quite different inflections not analogous to noun. The forms of the first personal pronoun which occur in OIA are given below :

	N	A	I	D	Ab	G	L
Sg.	<i>aham</i>	<i>mām</i> <i>mā</i>	<i>mayā</i>	<i>mahyam</i> <i>mahya</i> <i>me</i>	<i>mad</i>	<i>mama</i> <i>me</i>	<i>mayi</i> <i>me</i> (VS)
Du.	<i>āvām</i> <i>vām</i> (RV) <i>āvam</i> (ŚB)	<i>āvām</i> <i>nāu</i>	<i>āvā-</i> <i>bhyām</i>	<i>āvābhyām</i> <i>nāu</i>	<i>āvā-</i> <i>bhyām</i> <i>āvad</i> (TS)	<i>āvayoh</i> <i>nāu</i>	<i>āvayoh</i>
Pl.	<i>vayam</i>	<i>asmān</i> , <i>naḥ</i>	<i>asmā-</i> <i>bhiḥ</i>	<i>asmabhyam</i> <i>asme</i> , <i>naḥ</i>	<i>asmad</i>	<i>asmākam</i> <i>asmaka</i> <i>naḥ</i>	<i>asmāsu</i> <i>asme</i>

The history of the first personal pronoun is discussed below :

Singular

Nom. Sg.

The IE probably had three forms for the nominative singular of the first personal pronoun. These are—

- (i) IE **eǵhom*,
 - (ii) IE **eǵō(m)*, and
 - (iii) IE **eǵō*.
- (i) IE **eǵhom* gave rise to Ir. *az'ham*, OIA. *aham*, Av. *azəm*, OP. *adam*, OChSl. *azū*, Lith. *as*, Latvian and Old Pruss. *es*, Arm. *es* (< **ets*).
 - (ii) IE **eǵō(m)* gave rise to Gk. *egōn*, *egō-ge*, and Old Latin *egō*, whereas,
 - (iii) IE **eǵō* which was unaccented gave rise to Latin *ego*, Germ. **ikam*, Gothic. *ik*, HG. *ich*, OE. *ic* (and *īc*) Mod. E. *I*.

Acc. Sg.

IE **mē-m* (*m* from accusative ending of nouns) > OIA. *mā-m*, Av. *mām*, OP. *mām*.

IE **mē* > OIA. *mā*, Av. *mā*, OP. *mā*, Lat. *mē*. Actually, OP. and Av. form *mā* which agrees with Gk. *me* < **mē* is short, but because of final, they all write long in monosyllables.

IE *(*e*) *me* > Gk. *eme*, *me*, *emē-ge*, Goth. *mlk*, OHG. *mi-h*, NHG. *mic*.

Ins. Sg.

IE **mē/mō* - **ā* > OIA. *mayā*, Lat. *mē*.

Dat. Sg.

IE **mēghī-om* > OIA. *māhyam*, Lat. *mihi*, Umb. *mehe*, Doric. *emin*, Goth. *mis*, OHG. *mir*, (here the Gk. form is reconstructed on the analogy of the dative and locative *hāmin*).

IE **moi* > OIA. *me*, Gk. *moi*, *emoi*, Lat. *mē* (unaccented), Doric *emin* (with dative pl. ending as in *ammin*).

Abl. Sg.

The OIA. Abl. sg. form points to **mē* presumably with an added particle *d*.

IE **mēd* > OIA. *mad*, Av. *mat*, OP. *ma*, Old Latin *mēd*, Cl. Lat. *mē*.

Gen. Sg.

IE **mana* > OIA. *māma* (consonantal assimilation), Av. *mana*, OP. *manā* (<PIr. **mana*), Lith. *māno*, Lat. *mei*, *mis*, Goth. *meina*.

IE **mol* > OIA. *me*, GAv. *mōi*, Av. *mē*, OP. *mai*, Gk. *moi* (dative).

IE **mei* > Lat. *mei*.

IE **eme-si-o* > Gk. Hom. *emeio*, *eméo*, *emeû*, Att. *emou*, *meu*, *mou*.

Loc. Sg.

IE **mei/moi* > OIA. *mē*, *mayi*, cf. Gk. *emoi*, *moi*, *emin*, cf. Lat. *mēd*, *mē*, Goth. *mis*, OHG. *mei*.

Dual

Nom. IE **ue* > OIA. *vām*, *āvām*, *āvām*, Av. *āvā*, OChSl. *vē*, AS. *wīt*.

Acc. IE **nōu* > OIA. *nāu*, Av. *nā*, Gk. *nō*, *nōi*, OChSl. *na*.

Ins. + Dat. + Abl. IE *(*ē*)*uē-bhiōm* > OIA. *āvābhyām*.

Gen. + Loc. IE *(*ē*)*ue-i-ous* > OIA. *āvayos*.

Plural

Nom. Pl.

IE **uei + om*/**ue-s* > OIA. *vayām*, Av. *vaēm*, OP. *vayam*, Goth. *wei-s*, OHG. *wei*.

For the Gk. the IE base was **ns-me*.

IE **ns-me-s* > PGK. **asmes* > Hom. *ammes*, Boet. *hāmes*, Hom. Ion. *hemeis*.

Acc. Pl.

The accusative pl. forms are made from the weak grade **ns* with the addition of a particle—**sme*/**smi*. Thus

(i) IE **ns-sme + ons* > OIA. *asmān*, Av. *ahzma*, Hom. *ámme*, (<PGk. **asme*), Dor. *hāme*, Ion. *hēmeis*, Att. *hemās*.

(ii) IE **ns-sme-ns* > OIA. *a-smān*, Goth. *uns*, *unsis*.

(iii) IE **ns-me* > OIA. *asma*.

(iv) IE **nes*/**nos* > OIA. *naḥ*.

(v) IE **nēs*/**nōs* > Lat. *nōs*, Av. *nō*, *nā*.

Ins. Pl.

IE **ns-mē + bhis* > OIA. *asmābhiḥ*.

IE **ns-mō* > OIA. *asmā*.

IE **ns-mē + āis* > Lat. *nōbīs*.

Dat. Pl.

IE **ns-mei + oibhiom* > OIA. *asmābhyam*, Av. *ahmaibyā*.

IE **ns-mei* > OIA. *asmé*, Av. *ahmai*, Gk. *ámmin*, *ámme*, *hēmin*.

IE **nes* > OIA. *naḥ*, Av. *nō*.

In Gk. the pl. was formed from the original locative sg. ending in *-smin* which occurs in OIA. *tasmin*. This ending which becomes *-in* in Greek is added to the stem **asm(e)*, as Aeolic *ámmin*, *ámme*, Dor. *hāmin*, Att. Ion. *hēmin* besides Att. *hēmin* (the long *i* is probably on the analogy of the long vowel plural endings).

Abl. Pl.

IE **ns-med* > OIA. *asmad*, Av. *ahmat*, cf. Lat. *nōbis*.

Gen. Pl.

IE **ns-me-ōm* OIA. *asmākam*, Av. *ahmākəm*, OP. *a(h)māxam*.

[The source of *-k-* in OIA. and Av. and the aspiration in OP. cannot be clearly explained, but it seems that the formative suffix *-(ā)ka* is added (cf. *āsmākīna*, *yāusmākīna* etc.)]

In Gk. the genitive pl. was formed from the stem of the accusative plural **ns-me* plus with the genitive plural ending *ōm*, as, Hom. *hemeiōn*, Hom. (Ion). *hēmēōn*.

Loc. Pl.

IE **ns-mi-(n)-oisu*/**ns-mei-oi/su* > OIA. *asme*, *asmāsu*, cf. Gk. *āmmīn*, *āmme*, *hēmīn*.

2. Second personal pronoun

Like the first, the second personal pronoun is also not distinguished by gender and is formed from different stems, such as, *tu/tv-*, *tava-te*, *va-*, *yuva-*, *yuṣma*. Like the first, some of the stems do not take any inflections and some take quite different terminations, and in some cases, nominal inflections are used. The forms of the second personal pronoun which occur in OIA are given below :

	N	A	I	D	Ab	G	L
Sg.	<i>tvam</i> [<i>tuam</i>]	<i>tvām</i> <i>tvā</i>	<i>tvayā</i> <i>tvā</i> (RV)	<i>tubhyam</i> [<i>tubhya</i>] <i>te</i>	<i>tvad</i>	<i>tava</i> <i>te</i>	<i>tvayi</i> <i>tve</i> (RV.VS)
Du.	<i>yuvām</i> [<i>yuvam</i>]	<i>yuvām</i> <i>vām</i>	<i>yuvā-</i> <i>bhyām</i> [<i>yuva-</i> <i>bhyām</i>]	<i>yuvā-</i> <i>bhyām</i> <i>vām</i>	<i>yuvā-</i> <i>bhyām</i> <i>yuvad</i> (RV)	<i>yuvayoh</i> [<i>yuvoḥ</i>] <i>vām</i>	<i>yuvayoh</i>
Pl.	<i>yūyam</i>	<i>yuṣmān</i> <i>vaḥ</i>	<i>yuṣmā-</i> <i>bhiḥ</i>	<i>yuṣma-</i> <i>bhyām</i> <i>vaḥ</i>	<i>yuṣmad</i>	<i>yuṣmākam</i> <i>yuṣmāka</i> (RV) <i>vaḥ</i>	<i>y uṣmāsu</i> <i>yuṣme</i>

The history of the second personal pronoun is discussed below :

Singular

Nom. Sg.

IE **tū-om* > OIA. *tuvām* (vedic), *tvam*, Av. *tū*, *tvēm*, *tūm*,
OP. *tuvam*, *tuva-*

IE **tū-om* > Gk. *tú*, *sú*, *túnē* (Hom.). Lat. *tū*, Goth. *þū*, OHG. *dū*.

IE **tu* > Gk. *tú* (Dor), Att. *sú*, OE. *þu*.

Acc. Sg.

IE **tūē* > OIA. *tvā*, Av. *θwā*, Gk. *sé*, *tē*, Lat. *tē*, Goth. *þuk*.
OHG. *dih*.

IE **tūē + m* > OIA. *tvām*, Av. *θwām*, OP. *θuvām*.

Ins. sg.

IE **tūē/*tūō* > OIA. *tvā*, *tvayā*, Av. *taibyō*,

Dat. Sg.

IE **tubh-*, **tū-oi*, **tū-ei* > OIA. *tubhyam*, Av. *taibyō*, Lat. *tibi*,
Goth. *þus*, OHG. *dir*.

IE **toi* > OIA. *te*, Av. *te*, OP. *taiy*, Gk. *toi*, *soi*.

Abl. Sg.

IE **tued/*tēd* > OIA. *tvat*, Av. *θwat*, Lat. *tēd*.

Gen. Sg.

IE **teue/*tuei* > OIA. *tava*, Av. *tava*, Gk. *seio*, *sou*, Lat. *tui*,
tis, Goth. *þeina*, OHG. *din*.

IE **toi* > OIA. *-te*, Av. *te*, OP. *taly*, Gk. *sol*.

Loc. Sg.

IE **tuei* } > OIA. *tvé*, *tvayī*, Av. *θwōi*, Gk. *sol*, *th*, *tein*, Lat.
IE **tūoi* } *ted*, *tē*, Goth. *þus*, OHG. *dir*.

Dual

Nom. Du.

IE **iū/*iū* > OIA. *yuvam*, *yuvām*, Goth. *juþ*.

Acc. Du.

IE **uō/*ē* > OIA. *vām*, *yuvām*, Goth. *iggis*.

Ins. + Dat. + Abl. Du.

IE **uō/ē* > OIA. *yuvābhyām*, *yuvabhyam*.

Gen. + Loc. Du.

IE **uō/ē* > OIA. *yuvayos*, *yuvōs*

Plural

Nom. Pl.

The expected form in Sanskrit is **yūṣ-am*, but on the analogy of *vayam* we get *yūyam*.

IE **iū-i(s)-om* > OIA. *yūyam*, Av. *yūš*, *yūz-am*, Gk. *hūmmes*, *hūmeis*, Lat. *vōs*, Goth. *jūs*, OHG. *ir*.

Acc. Pl.

IE **ues/*uos* > OIA. *vas*, Av. *vo*, *vā*, Lat. *vōs*.

IE **us-sme* > **us-me* > OIA. *yuṣmān*, Gk. *hūsme*, *humas*, *homéas*, Goth. *izwis*, OHG. *iuwih*.

Ins. Pl.

IE **usmē + bhis*
IE **usmō + bhis* } > OIA. *yuṣmābhis*, Lat. *vobis*.

Dat. Pl.

IE **ues-mei* > OIA. *yuṣme*.

IE **ues-mei + bhīom* > OIA. *yuṣmabhyam*, Av. *yūšmoibyā*, Gk. *hummin*, *humne*, *hūmin*, Lat. *vōbīs*, Goth. *izwis*, OHG. *iu*.

IE **ues/*uos* > OIA. *vah*, Av. *vō*.

Abl. Pl.

IE **usmod* > OIA. *yuṣmad*, Av. *yuṣmaθ*, cf. Lat. *vōbīs*.

Gen. Pl.

IE **ues/*uos* > OIA. *vah*, Av. *vō*.

IE **usme* > OIA. *yuṣme*, Gk. *hūmeiōn*, *humōn*, Lat. *vestrī*, *vestrum*, Goth. *izwara*, OHG. *iuwer*.

IE **usmē* > OIA. *yuṣmākam*, Av. *yūšmākəm* [with the suffix (*ā*)ka as in *asmākam*].

Loc. Pl.

IE **usmi/*usmei-su* > OIA. *yuṣne*, *yuṣmāsu*, Gk. *hummin*, *humme*, *hūmin*, Lat. *vōbīs*.

3. Third personal pronoun

The third personal pronoun *tad* is, in fact, a demonstrative pronoun and will be discussed there.

II. Demonstrative

The OIA demonstrative pronouns are *tad*, *etad*, *idam*, *adas*.

The IE bases for demonstrative pronoun had two forms for three genders, e.g., nom., mas. and fem. was **so* and **sā*, and the rest were formed from **to-*, **te*, fem. **tā* with usual pronominal endings.

Some declensional endings are different from noun, e.g., in the nom. and acc. neut. sg. they take *-d* instead of *-m*; they take suffix *sma* in the dat, abl, loc. masc., and *-sya* dat. abl. gen. loc. and in the plural they take *-e* for *ās* etc.

1. The origin of the pronoun *tad* is given below :

Singular

Masculine and Neuter :

Nom. IE **so* > OIA. *saḥ*, Gk. *ho*, Goth. *sa*.

Acc. IE **tom* > OIA. *tam*, Gk. *ton*, Lat. *is-tum*, Goth. *þan-a*.

Neuter Nom. + Acc.

IE **tod* > OIA. *tad*, Gk. *to*, Lat. *is-tud*, Goth. *þat-a*.

OE. *þæt*, Eng. *that*.

Ins. IE **taino* > OIA. *tena*.

Dat. IE **tosmōl* > OIA. *tasmāi*.

IE **tōi* > Gk. *tōi*, Lat. *is-tō*.

Abl. IE **to-d* > OIA. *tad*.

Gen. IE **tosjo* > OIA. *tasya*, Hom. *tofo* (< **tosjo*),

IE **toso* > Att. Ion. *tou*, Doric. *tō*

IE **teso* > Goth. *þis*, OHG. *des*.

Loc. IE **tosmin* > OIA. *tasmin*.

IE **so-smin* > OIA. *sa-smin* (RV)

Dual

Nom. acc. IE **tōu* > OIA. *tāu*,

**tō* > OIA. *tā*, Gk. *tō*.

Neuter IE **toi* > OIA. *te*, Gk. *tō*.

The other forms are declined like nouns with the IE base **tō* plus the nominal suffix.

Plural

Nom. IE **toi* > OIA. *te*, Dor. *toi*, Lat. *is-tī*, Goth. *þái*.

Acc. IE **tons* > OIA. *tān*, Cret. *tons*, Att. Ion. *tous*. Lat. *is-tōs*, Goth. *þans*.

Nom., Acc. (Neu) :

IE **tā* > OIA. *tā* (vedic), Gk. *ta*, Lat. *is-ta*, Goth. *þō*.

Ins. IE. **tōis* > OIA. *tāih*, Lat. *is-tīs*, Lith. *taīs*.

Dat. and Abl. are formed like the noun.

Gen. IE **toisōm* > OIA. *teṣām*, Gk. *tōn*.

Loc. IE **toisu* > OIA. *teṣu*, cf. Gk. *toīsi*.

Feminine :

Singular

Nom. IE **sā* > OIA. *sā*, Dor. *hā*, Att. Ion. *hē*, Goth. *sō*.

Acc. IE **tām* > OIA. *tām*, Gk. *tēn*, Lat. *is-tam*, Goth. *þō*.

Ins. and Abl. are formed like the noun.

Dat. IE **tosīai*/**tesīai* > OIA. *tasyāi*.

IE **tesāi* > Goth. *þizai*.

Gen. IE **tosīās*/**tesīās* > OIA. *tasyāh*.

IE **tesās* > Goth. *þizos*

Dual

Nom., Acc. IE **toi* > OIA. *te*, Gk. *tā*.

The rest are like the noun.

Plural

Nom. IE **tās* > OIA. *tāh*, Lith. *tōs*, Goth. *þōs*, Gk. *taī* and *hai* were formed on the analogy of *toi* and *hoi*.

Acc. IE **tāns* > OIA. *tāh*, Cret. *tans*, Att. *tās*, Lat. *is-tās*, Goth. *þōs*.

Ins., Dat. and Abl. are formed like the noun.

Gen. IE **tāsām* > OIA. *tāsam*, Gk. *tāōn*, Lat. *is-tarum*.

Loc. IE **tāsu* > OIA. *tāsu*, cf. Gk. *taīs*, *taisi*.

2. The other demonstrative pronouns are *etat*, *idam* and

adas of which the nom. sg. of *etat* and *idam* have different bases.

IE **es-* > OIA. *as-āu*,

IE **em* > OIA. *ayam*,

IE **esiō* > OIA. *asya*,

IE **esiās* > OIA. *asyāḥ*,

IE **ed-* > OIA. *ad-*

For *ena* base in OIA, IE had **eino-* which became *ena-m* in OIA. and (e)*keinos* in Gk., *anās* in Lith. and *onu* in OCHSl.

In OIA *a-sāu* (that), the IE base **e-* occurs in Gk. *e-keinos*, *e-kei*, *e-keithen*, and in Lat. *e-quidem*.

IE **is-* > Goth. *is*, Lat. *is*.

IE **im* (acc.) > OIA. *imam*, Old Lat. *im*, Goth. *in-a*.

The IE base **i-* occurs in OIA. *i-dā* (now) as in *idānīm* (in this moment), *i-ha* (here), Gk. *i-dē* (and).

The feminine stem **i-* occurs in OIA. *i-yam* (<**i-dm*), 'this'.

III. Relative

IE bases are masculine and neuter *iō-* and feminine *iā-*.

Nom. Sg. IE *iōs* (mas.) > OIA. *yāḥ*, Phrygian *ios*,

iā (fem.) > OIA. *yā*,

iōd (neu.) > OIA. *yāt*.

Gen. IE *iōsiō* (mas.) > OIA. *yasya*, Gk. *hou*,

iōsiās (fem.) > OIA. *yasyāḥ*.

Nom. Pl. IE **iōi* > OIA. *ye*,

IE **iās* > OIA. *yāḥ*,

IE **iā* > OIA. *yā* (Vedic).

The rest are like the other pronominal forms.

IV. Interrogative

IE had several bases for interrogative pronoun, e.g., **q^uo*, **q^ue*, fém. **q^ui*, **q^uu*. OIA forms are related to IE **q^uo* and **q^uā*.

IE **q^uos* > OIA. *kaḥ*, Goth. *hvas*, Lith. *kās*.

IE **q^ood* (neu.) > OIA. *katarah*, Gk. *poteros*, Lat. *quod*, Goth. *hvaþar*, OE. *hwæt*, Eng. *what*.

IE **q^oosmin* > OIA. *kasmin*.

IE **q^oā* (fem.) > OIA. *kā*, Goth. *hvō*.

IE **q^oām* > OIA. *kām*, Goth. *hvō*, Dor. *pāi*, Att. *pēi*.

The IE stem **q^ou* occurs in adverbial form, such as, OIA. *kū* (Vedic) where, cf. *kutra*, Lith. *kur*, Gk. *hō-pūs* (whither).

The OIA neuter base *kim* is from the weak grade of IE **q^ooi-m*.

V. Indefinite

The indefinite pronouns *kaścit*, *kaścana*, *ko'pi*, *sama* (any, every) and *simā* (every, all) are found in the RV., and they are declined like the pronoun in sing. and pl.

The other indefinite pronouns are formed with the particles *ca*, *cana*, *cid* and *api* with the interrogative pronoun *kim*, e.g., *kaśca* (any, anyone), *kaścana* (any one, someone), *kaścit* (any, anyone, some, someone) and *ko'pi* (anyone).

VI. Reflexive

The reflexive pronouns *ātman*, *svayam*, *tanū* and *nija* are used in OIA.

The origin of *ātman* is very doubtful. It is connected with Gk. *autós* (<IE **asu* (life) + *tos* = **asutos* > Gk. *autos*, or *au* (again) + *to-s* > *autós*).

For *sva-yam*, the IE base is **sue-am*, interposing *y* as in *a-yām* from *a*-base.

The other form *tanū* (body, self) is the regular form in the RV., e.g., *yajasva tanvam* (RV. X. 7.6) 'worship thyself'.

The form *nija* is used in classical Sanskrit only.

VII. Reciprocal

The reciprocal pronouns are *anyonya*, *itaretara* and *paraspara* meaning 'each other', 'one another'. They are mainly found in the accusative or as adverbial form. But occasionally they also appear in other cases, such as, *anyonyena*, *parasparāt* etc.

VIII. Possessive

The possessive pronouns were declined like the nouns and were used like adjectives. They do not occur frequently in the RV, because the genitive of the personal pronouns are generally used for them.

The possessives of the first person are *māmaka* (RV), *māmaka* (< *mama* + *ka*) from the sing. base, and *asmāka* (< *asmā* + *ka*), *āsmāka* (VS) from the pl. base.

Similarly, the possessives of the second person are *tāvaka* (< *tava* + *ka*), *tva* (< IE **tuos*) from the sing. base and *yāuṣmāka* (< *yuṣmā* + *ka*) from the pl. base.

In a sense, the possessive of the third person (though used generally) is *sva* (< IE **suos*), Hom. Att. *hós*.

IX. Correlative

Correlative pronouns are formed from the bases of the pronouns *tad*, *etad*, *idam*, *yad* and *kim* with different suffixes like *vat* and *ti*. It is also formed with the root *dṛś* (to see) and the forms are *dṛś-dṛśa-dṛkṣa*. The feminine suffix *-ī* is added to the correlative forms.

X. Pronominal Adverbs

The pronominal adverbs are derived from the bases of the pronouns—*tad*, *idam* (= *a/i*), *yad* and *kim* (*ku*) with different suffixes, like *-tra*, *-tas*, *-rhi* and *dā*.

XI. Pronominal Adjectives

A number of pronominal adjectives are declined like the pronominal declension and need not be discussed here.

XII. Miscellaneous Pronouns

The miscellaneous pronouns are a group of words which share in common with the real pronoun certain peculiarities of declension. Some of them can be adjective as well, if they are used in certain senses. For example, *dakṣiṇa* (clever) in *dakṣiṇā gāthakāḥ* (clever singers), *uttarāḥ kuravaḥ* (the northern Kurus), a proper name, *prabhūāḥ svāḥ* (great wealth) are not pronouns in the sense mentioned above.

CHAPTER TEN

Verbs

The OIA had inherited almost the entire verbal system of the IE language which consisted of root, person, number, voice, mood, tense, augment, reduplication, aspect, personal terminations, infinitives, participles and gerunds. They also inherited the secondary conjugational pattern, such as, passive, causative, denominative, desiderative and frequentative. It is presumed that the IE verbal system was simple, and not as elaborate and complicated as is found now in OIA, Greek, Latin and other cognate languages. There are some new innovations as well both in OIA and Greek. For example, in OIA the periphrastic perfect (*gamayām cakāra*, AV. XVIII. 2. 27) and the pluperfect (of. Pāṇini's *cañ*-aorist = the reduplicated aorist), the periphrastic future (e.g., *bhavitā*), the conditional (e.g. *abhaviṣyat*) and many others are of later origin. In Greek also the pluperfect and the future perfect, and the aorist passive in *-thēn*, the future passive in *-thēsomai*, and also the passive participle in *-theis* and many others are of later origin.

Though there are some innovations in OIA as well as in Greek, the major characteristic features of OIA verbal system were originated from IE. The IE verbal system was broadly divided into two categories—(a) primary and (b) secondary. The primary conjugational system is again subdivided into finite and non-finite. The finite verb distinguishes the primary conjugation and the secondary conjugation. The primary conjugation is made from the original root, whereas, the secondary conjugation is made from the derivative formations, such as, passive, causative, denominative, desiderative and frequentative. The latter conjugation does not differ from the former. The secondary conjugation follows the pattern of the primary conjugation of the present stem-system. The finite verb further distinguishes person, number, voice, mood and tense. The non-finite forms are the infinitive, participles and the gerund. The whole picture of the OIA verbal system as inherited from IE as well as some new innovations not found in IE, can be tabulated thus :

A. Primary		B. Secondary
a. Finite	b. Non-finite	
<ol style="list-style-type: none"> 1. Root 2. Person 3. Number 4. Voice 5. Moods : <ol style="list-style-type: none"> (i) Indicative (<i>laṭ</i>) (ii) Subjunctive (<i>leṭ</i>) (iii) Optative (<i>vidhi-liṅ</i>) or Potential (iv) Imperative (<i>loṭ</i>) (v) Conditional (<i>lṛṅ</i>) (vi) Benedictive (<i>āśīr-liṅ</i>) (vii) Injunctive (cf. <i>māhi luṅ</i>) 6. Tenses : <ol style="list-style-type: none"> (i) Present (<i>laṭ</i>) (ii) Past <ol style="list-style-type: none"> (a) Imperfect (<i>laṅ</i>) or First Preterite (b) Perfect (<i>liṭ</i>) or Second Preterite 1. Pluperfect 2. Periphrastic perfect (c) Aorist (<i>luṅ</i>) or Third Preterite (iii) Future <ol style="list-style-type: none"> (a) First Future (<i>luṭ</i>) or Periphrastic Future (b) Second Future (<i>lṛt</i>) or Simple Future 7. Augment (<i>aḍ āgama</i>) 8. Reduplication (<i>abhyāsa</i>) 9. Aspect (<i>vikaraṇas</i>) 10. Verbal stem-system 11. Personal terminations 12. Conjugation (<i>ten gaṇas</i>) (Thematic and Athematic) 	<ol style="list-style-type: none"> 1. Infinitive (<i>tumun</i>) 2. Participles <ol style="list-style-type: none"> (i) Present participle (<i>śatṛ, śānac, cānaś</i>) (ii) Perfect participle (<i>kvasu, kānac</i>) (iii) Future participle (<i>syatṛ, syamāna</i>) (iv) Past participle (<i>кта, ktavatu</i>) (v) Potential participle (<i>tavya, anīya, nyat, yat, kyap</i>) 3. Gerund <ol style="list-style-type: none"> (i) Repetitive (<i>namul</i>) (ii) Past (<i>ktivā</i>) (iii) Perfect (<i>lyaplyap</i>) 	<ol style="list-style-type: none"> 1. Passive <ol style="list-style-type: none"> (i) Transitive (ii) Intransitive (iii) Quasi-passive or Reflexive 2. Causative (<i>nijanta</i>) 3. Denominative (<i>nāmadhātu</i>) 4. Desiderative (<i>sannanta</i>) 5. Frequentative or Intensive (<i>yaṅanta</i>)

I. The Finite Verb

1. **Root :** Primarily the IE roots were dissyllabic which ultimately became monosyllabic, as is evidenced by OIA, Gk. and other IE languages. But the roots of dissyllabic or even trisyllabic found in OIA, are nothing but a formation from monosyllabic roots, e.g., OIA. *cakās* is the reduplication of *√kās*, *daridrā*, a trisyllabic root, is a formation from nominal stem ; in Gk. also *gignōskō* is nothing but a reduplication of *√gnō* cf. OIA. *√jñā*. The smallest possible unit of a word is root. Root may start with a vowel or with a consonant, both in OIA and Gk. and in others. The roots in the secondary conjugation are not monosyllabic, because the base is formed with additional suffixes. There are nearly 2000 roots in OIA as registered in the Sanskrit *dhāturūpādarśa*, the exact number being 1944 in Pāṇini's *Dhātupāṭha* distributed as follows :

Thematic	Athematic
(1) <i>bhvādi</i> —1010	(5) <i>adādi</i> —72
(2) <i>divādi</i> — 141	(6) <i>juhotyādi</i> —24
(3) <i>tudādi</i> — 157	(7) <i>svādi</i> —34
(4) <i>curādi</i> — 410	(8) <i>rudhādi</i> —25
	(9) <i>tanādi</i> —10
	(10) <i>kryādi</i> —61
1718	226

Total : 1718 + 226 = 1944.

The remaining roots are not in the *Dhātupāṭha*, but in Pāṇini's grammar and in the *Gaṇapāṭha*. But all the roots are not used in vedic as well as in classical Skt. Whitney probably has collected nearly 1000 roots actually used in vedic and classical literature.

2. **Person** and 3. **Number** : In IE there were three persons—first, second and third, and three numbers—singular, dual, and plural. Indo-European dual was not frequently used as could be gathered from Vedic and Greek usages. Even in Gk. and Vedic the occurrences of dual are very rare. That is why the dual is almost lost in Goth. and in other cognate languages.

4. Voice : IE had two voices—active and middle. The active (Skt. *parasmaipada*) denotes the action to the person, whereas the middle (*ātmanepada*) denotes the action to the self. The passive in Skt., particularly with 'ya', is a later development. In OIA and Gk, however, the passive is used with the endings of the middle. There are roots which are used only in active or in middle, and there are a few roots which could be used both in active and middle voice. They are known as 'Reflexive' verbs.

5. Moods : The basic moods in IE which are found in OIA., Gk., Lat., Goth. and other languages are the indicative, subjunctive, optative and imperative. The other moods are partly originated in OIA and partly could be traced from some other suffixes mixed with other moods. The conditional in OIA is almost a new formation though in Gk. conditional is mostly replaced by subjunctive. The benedictive is, in a sense, an innovation in OIA. Injunctive is rather a formation without the augment and this is normally formed with the past indicative verb as far as suffixes are concerned minus the augment. And as a result we have injunctives in the imperfect and in the aorist and in the perfect e.g.—present injunctive Skt. *bharat* Gk. *phere* beside *abharat*, Gk. *ephēre*, aorist injunctive Skt. *dhāt*, Gk. *thēs* < **thēs* beside Skt. *adhāt*, Gk. *ethēs*. Perfect injunctive is Skt. *dūdhot* < *√dhū*. This mood fully preserved in vedic was used perhaps with the indicative and subjunctive meaning, but in classical Skt. it was originally preserved in imperative form in combination with *mā* to express prohibition. The injunctive was partly used with future meaning. The nature of its meaning both in Gk. and Skt. has not yet been fully investigated.

6. Tenses : In IE there were three tenses—present, past, and future. The past is, however, used in many ways, but all of them were not from the common Indo-European. The imperfect, aorist and perfect were derived from Indo-European, but OIA has some new innovations and so also has Gk. The pluperfect forms are extremely rare in OIA.

Macdonell, however, has accepted only 60 such forms in vedic literature, whereas Arnold has accepted some more. But pluperfect in Gk. is a regular development quite on a par with aorist. It may be that the pluperfect was a later development which developed quite fully in Gk, whereas in OIA they were merged with the reduplicated type of aorist. Similarly periphrastic perfect is extremely rare both in Vedic and Gk, although in the later stages of both the languages they are used profusely. There are, in fact, one or two examples in Vedic, (*gamayām cakāra*). The future tense, though developed from IE, has two forms—(a) periphrastic future which is obviously a new innovation in Skt. and is not derived from Indo-European. This formation is purely agentive and declined rather than conjugated. (b) Simple future—is, of course, a direct descendant of Indo-European. It is to be noted that the aorist is lost in Lat. and other IE languages. Except a few forms here and there, it is merged with the perfect in Lat. and also in other IE languages. However, on the whole except a few innovations either in Gk or in OIA, the OIA tense system was inherited from Indo-European.

7. **Augment** : The OIA augment *a* (= Gk. *e*) also came from IE **e*. Augment is mainly found in Gk and OIA and also in a few cases in Armenian '*elik*' cf. OIA *aricat* (< *'rc*). Augment is used in the secondary tenses, such as, imperfect, aorist and pluperfect and in conditional, though at times, augmentless forms are also used. In injunctive the augment is not used.

8. **Reduplication** : Reduplication is an IE phenomenon fully preserved in OIA and Gk. In Lat. and Goth. there are a very few remnants of IE reduplication. In Lat. there may be some 20 reduplication forms, such as, *memini*, *cecini* etc., and in Goth. even fewer than Lat., e.g. *tēka*-> *taltōk* (I touched), *hāita*-> *halhāit* (I called), etc. In other IE languages, this reduplication of perfect is lost, and it is normally expressed with an auxiliary verb, to 'have' as in English. Reduplication is found in the perfect, in the desiderative, in the

frequentative and in the reduplicating class of verbs. The reduplicated vowel is not the same in all this reduplicating roots. Normally the reduplicated vowel is 'a' and 'i' but in other cases, such as, in frequentative the vowel in the reduplication is gunated as *bobhūyate* (< *√bhū*), *bebhidyate* (< *bhid*), *sesicyate* (< *sic*).

9. Aspect : IE verbal system is also characterised by aspect which describes simply the manner in which an action or a change of state or condition is regarded by the speaker. From the structure of IE verbal system, it seems that IE verbal system had emphasis on aspect rather than on tense. The *vikaraṇas* of the ten *gaṇas* were, perhaps, used to show the aspectual differences between one *gaṇa* and the other. As most of the meanings of the *vikaraṇas* are obscure now, we consider them simply as so many formal types. For example, OIA. *patāmi*, Gk. *pétomai*, simply means 'I fly', whereas, OIA. *pātayāmi*, Gk. *potéomai* means 'I hover'. It is also suggested that the nasal infix originally expressed the idea of terminative action, e.g., OIA. *stṛṇōmi*, Gk. *stornumi*, 'I strew', OIA. *mṛnāmi*, Gk. *márnamai*, 'I crush', OIA. *ṛṇōmi*, Gk. *órnumi*, 'I move'.

On the basis of aspect, three *stem-systems*—present, perfect and aorist—were recognised each expressing several aspectual meanings. In each stem-system, there are tenses (present, past and future), moods, infinitive, participle and gerund. The present stem-system generally signifies incomplete action which is of various kinds, such as, progressive, continuative, durative, cursive, conative, consuetudinal, or customary, etc. The perfect stem-system generally describes the completed action which could be stative, resultative and intensive. The aorist stem-system signifies narrative tense, a complete action, which could be momentary or instantaneous, terminative or concentrative.

The aspectual meaning can be determined from the context where two different tenses are used side by side, which indicate the aspectual meaning of the passage. For example, *uta tvah paśyan na dadarśa vācam* (RV. X. 71. 4)—'And one seeing does not indeed see speech'. Here the sense of *dadarśa*

is not past, but present. So also *sa dādhāra dyām*—‘He holds the earth’, where *dādhāra* is present.

10. **Verbal stem-system** : Structurally from the point of view of stem formation, a complete paradigm of OIA verb may be classified under four heads, and these are known as (i) the present stem-system, (ii) the perfect stem-system, (iii) the aorist stem-system, and (iv) the future stem-system. Each stem-system is characterized by tenses, moods, infinitives, participles and gerunds. The future stem-system comprises the future tense together with its participles and the conditional mood. In each stem-system the bases are different, and the same base is found throughout its tenses, moods, infinitives and participles, e.g., *bhav-a-ti*, *a-bhav-a-t- bhav-i-tum*, *bhav-an* in the present stem *babhū-va*, *babhū-vatu*, *babhū-vān* in the perfect and *a-bhū-t*, *bhū-ta*, *bhū-tvā* in the aorist, and *bhaviṣyati* and *abhaviṣyat* in the future. There are some scholars who do not accept the future stem-system.

11. **Personal Terminations** : The personal terminations are of two kinds depending on the voices. Active and middle verbal terminations of OIA and Greek are only given below.

12. **Conjugation** : A conjugation of a verb means a full paradigm of a verbal form in all its tenses and moods, in all numbers, persons and voices, where the personal terminations are added to the roots after the *vikaraṇas*.

Personal Terminations

	Active		
	Third	Second	First
Present (lot) :			
	<i>ti = ti > si, ei</i>	<i>si = s, s (tha)</i>	<i>mi = mi, ō</i>
	<i>tas = ton</i>	<i>thas = ton</i>	<i>vas = ?</i>
	<i>anti = nti > nsi > si</i>	<i>tha = te</i>	<i>mas = men</i>
	<i>= anti > ansi > āsi</i>		
Imperative (lot) :			
	<i>tu = tō</i>	<i>hi = thi, s</i>	<i>āni = ×</i>
	<i>tām = tōn</i>	<i>tam = ton</i>	<i>āva = ×</i>
	<i>antu = ntōn</i>	<i>ta = te</i>	<i>āma = ×</i>

Third	Second	First
Optative (vidhiliñ) :		
yāt = oi	yās = s (tha)	yām = oimi, tēn
yātām = oiten	yātām = oiton	yāva = ×
yus = oien	yāta = oite	yāma = oimēn
Imperfect (lañ) :		
d = (t)	s = s, stha	am = n, ṇ = a
tām = tēn	tam = ton	va = ×
an = n(t), san	ta = te	ma = men
Future (lṛt) :		
syati = sei	syasi = seis	syāmi = somi, sō
syataḥ = seton	syathas = seton	syāvas = ×
syanti = sousi	syatha = sete	syāmas = somēn
Perfect (liṭ) :		
a = e, ke	tha = tha, kas	a = a, ka
atus = aton, katon	athus = aton, katon	va = ×
us = āsi, kāsī	a = ate, kate	ma = amen, kamen
Aorist (luñ) :		
d = e, se	s = as, sas	am = a, sa
tām = atēn, satēn	tam = aton, saton	va = ×
ān = an, san	tā = ate, sate	ma = amen, samēn
Middle		
Present :		
te = tai	se = sai	e = mai
āte = sthon	āthe = sthon	vahe = methon
ante = ntai	dhive = sthe	mahe = metha,
(= atai < ṇtai)		mestha
Imperative :		
tām = sthō	sva = so	āi = ×
ātām = sthōn	athām = sthon	āvahāi = ×
antām = sthōn	dhvam = sthe	āmahāi = ×
Optative :		
īta = oito	īthās = oio	īya = oimēn
īyātām = oisthēn	īyāthās = oisthēn	īvahi = ×
īran = oiato	īdhvam = oisthe	īmahi = oime(s)tha

	Third	Second	First
Imperfect :			
	<i>ta = to</i>	<i>thās = eo</i>	<i>i = mēn</i>
	<i>ātām = sthēn</i>	<i>āthās = sthon</i>	<i>vahi = ×</i>
	<i>anta = nto</i>	<i>dhvam = sthe</i>	<i>mahi = me(s)tha</i>
Future :			
	<i>syate = setai</i>	<i>syase = seai, seēi</i>	<i>syē = somai</i>
	<i>syete = sesthon</i>	<i>syethe = sesthon</i>	<i>syāvahe = ×</i>
	<i>syante = sontai</i>	<i>syadhve = sesthe</i>	<i>syamahe = some(s)- tha</i>

Perfect :			
	<i>e = tai</i>	<i>se = sai</i>	<i>e = mai</i>
	<i>āte = sthon</i>	<i>āthe = sthon</i>	<i>vahe = ×</i>
	<i>ire = ntai, atai</i>	<i>dhve = sthe</i>	<i>mahe = me(s)tha</i>

Aorist :			
	<i>t = ato, sato</i>	<i>thās = ao, sao, so</i>	<i>i = amēn, samēn</i>
	<i>atām = asthēn, sasthen</i>	<i>ōthām = asthon, sasthon</i>	<i>vahi = ×</i>
	<i>anta = anto, santo</i>	<i>dhvam = asthe, sasthe</i>	<i>mahi = ame(s)tha, same(s)tha</i>

II. Primary Conjugation

1. The Present stem-system

The present stem-system consists of a present indicative together with a subjunctive, an optative, an imperative, a conditional, injunctive, and an infinitive, participles and gerund. It has three tenses—present, past and future. In the present stem-system roots are generally classified into different *gaṇas*, and each *gaṇa* has a distinct type of *vikarāṇas*. Sanskrit grammarians have recognized only ten *gaṇas* for their system, each one of which is distinguished by a different *vikarāṇa*. But in Greek the verbs fall into two main classes—thematic and athematic—each of which is again sub-divided into several classes, making the number vary between six and twelve, or even more. Brugmann has arranged the ten

gaṇas of Sanskrit into 32 classes. However, following the Sanskrit tradition, the Greek and Sanskrit verbal determinatives can be compared below : The names of ten *gaṇas* are—

1 2 3 4 5
bhvādyadādi juhotyādīr divādiḥ svādīr eva ca |
 6 7 8 9 10
tudādiśca rudhādiśca tana-kryādi curādayaḥ ||

They are arranged as follows :

Thematic	Class	<i>gaṇas</i>	<i>vikaraṇas</i>	Equivalents	OIA type	Greek type
	1st	<i>bhvādi</i>	<i>kartari śap</i>	the root accented <i>a</i> -class	<i>bhārāmi</i>	<i>phērō</i>
	4th	<i>divādi</i>	<i>divādibhyaḥ śyan</i>	<i>ya</i> -class	<i>divyati</i>	<i>leússō</i>
	6th	<i>tudādi</i>	<i>tudādibhyaḥ śaḥ</i>	the accented <i>a</i> -class	<i>tudāti</i>	<i>leipō</i>
	10th	<i>curādi</i>	<i>curādibhyo nic</i>	the <i>aya</i> -class	<i>corāyati</i>	<i>potéomai</i>
Athematic	2nd	<i>adādi</i>	<i>adiprabhṛtibhyaḥ śapah, luk</i>	the root class	<i>ásmi</i>	<i>eimí</i>
	3rd	<i>juhotyādi</i>	<i>juhotyādibhyaḥ ślāu, śluḥ</i>	the reducing class	<i>dádhāmi dádāmi</i>	<i>títhemí dídōmí</i>
	5th	<i>svādi</i>	<i>svādibhyaḥ śnuḥ</i>	the <i>nu</i> -class	<i>stṛnómi</i>	<i>stórnumí</i>
	7th	<i>rudhādi</i>	<i>rudhādibhyaḥ śnam</i>	the nasal-class	<i>ruṇádḍhi</i>	<i>rhēm-bomai</i>
	8th	<i>tanādi</i>	<i>tanādikṛñbhyaḥ uḥ</i>	the <i>u</i> -class	<i>tanóti</i>	<i>thēgá-nō</i>
	9th	<i>kryādi</i>	<i>kryādibhyaḥ snā</i>	the <i>nā</i> -class	<i>krīṇāti</i>	<i>dám-nēmi</i>

A. Thematic

Ist class : *bhvādi* : the root accented class

In all the IE languages, the first or the *bhū*-class represents the largest number of roots. The main characteristic feature of this class is the *vikaraṇa a* (<IE *e/*o) which is added between the root and the termination, the root vowel being accented and gunated. When the root is accented, the base is in the first or normal/strong grade of ablaut of the *e*-series. The formation of this class is as follows :

√ <i>bhū</i> + <i>a</i> + <i>ti</i>	√ <i>būd</i> h + <i>a</i> + <i>ti</i>	√ <i>bhṛ</i> + <i>a</i> + <i>ti</i>
= <i>bhó</i> + <i>a</i> + <i>ti</i>	= <i>bód</i> h + <i>a</i> + <i>ti</i>	= <i>bhár</i> + <i>a</i> + <i>ti</i>
= <i>bhāv</i> + <i>a</i> + <i>ti</i>	= <i>bód</i> hati	= <i>bhár</i> ati
= <i>bháv</i> ati		

IE **bhéudh* + *o* + *ti* = OIA. *bódh* + *a* + *ti* = OIA. *bód*hati.

Gk. *peúthomai* (I perceive)/*peuthesthai*

IE **bhēr* + *e* + *ti* = OIA. *bhár*ati, Gk. *phērō* (I bear), cf. Lat. *lēgō* (I appoint).

To the first class there belong several other roots which take *a-* for their conjugational system. (i) Some roots are transfers from the reduplicating class, forming a reduplicating thematic base : OIA. *ti-ṣṭhā-mi*, Gk. *histēmi*, cf. Gk. *gī-gnō-mai* (I know), Lat. *gi-gnō* (I know) ; OIA. *pī-ba-ti*, cf. Lat. *si-stō* (I stand), cf. Gk. *mī-mnō* (I remember) ; OIA. *sad* > *sīdati* (<**sisd* < **si-sad-a*) ; OIA. *sac* (accompany) > *sāścati* (<**sā-sac-a*). (ii) Some roots are transfers from *nu*-class, e.g., OIA. *i* (send) > *ī-nv-ati* beside *inōti* ; OIA. *hi* (impel) > *hī-nv-ati* beside *hinōti* ; OIA. *ji* (quicken) > *jī-nv-ati* beside *jinōti*. (iii) Some roots are transfers from IE **ske/o* suffix, e.g., IE **g^mm-ske-ti* > OIA. *gácchati*, Av. *jasaiti*, Gk. *baske* ; IE **iem-ske-ti* > OIA. *yácchati*, OP. imp. mid. *āyasatā* (<*ā-yam*) ; IE **iū-ske-ti* > OIA. *yácchati* (separates). (iv) Some roots lose their nasal, e.g. OIA. *sañj* (hang) > *sājati* (<IE **snge-ti*), OP. Imp. *-ahajam* in *frāhajam* ; OIA. *rañja* (colour) > *rājati* ; OIA. *daṁś* (bite) > *dāsati* ; OIA. *svañj* (embrace) > *svājati*. (v) Some vowels are lengthened in the active, but not in the middle, e.g., *guh* (hide) > *gūhati*, *kram* (stride) > *krāmati*, but *kramate*. (vi) *ūh* (consider) is gunated, *dhase*, but *ūh* (remove) is not, *ūhate*. (vii) Some roots do not change their vowel, e.g., *kṛp* (lament) > *kṛpate*.

The conjugation of IE **bher* > OIA. *bhar* (<*bhṛ*) is given below :

IE *bher > OIA. bhar < bhṛ

Isg.	bhērō > OIA. bhārāmi, Av. barā, barāmi, Ar. berem, Lith. vežù, OChSl. berq, Gk. phērō, cf. Lat. agō, Irish. biur, Goth. baira, OHG. biru.
Du.	bhēro-ṇo/es(i) > OIA. bhārā-vas, Av. barā-vahi, Lith. vėja-va-vos(i), OChSl. bere-vě, Gk. Doric. phēromes, Att. phēro-men, Goth. bafrōs.
Pl.	bhēro-mos(i). -mēs(i) > OIA. bhārā-mas, -masi, Av. barāmahi, Ar. beremk, Lith. vėja-me, mē(st), OChSl. bere-mū, Gk. Doric. phēro-me, Att. phēromen, cf. Lat. agimus, Irish. ber-mme, ber-am(?), Goth. baira-m, OHG. beramēs.
2sg.	bhēre-si > OIA. bhārasi, Av. barā-hi, Ar. beres, Lith. veži, OChSl. bere-ši, Lith. Russ. bere-s, Gk. phērēis, cf. Lat. agi-s, Irish. beri-, Goth. bafrī-s, OHG. birī-s.
Du.	bhēre-tes, -thes > OIA. bharathas, Lith. vėja-ta, vėja-tosi, OChSl. bereta, Gk. phéreton, cf. Lat. agitis (2nd pl.), Goth. baira-ts, OHG. beret (2nd pl.)
Pl.	bhēre-to, -the > OIA. bhāratha, Av. bara-ṭa, Ar. berēk, Lith. vėja-te, tes(i), OChSl. berete, Gk. phērete, cf. Lat. agi-tis, Irish. berld, berthi, berthi, Goth. bafrī-þ, OHG. berit, bera-t, (bere-t).
3sg.	bhēre-ll > OIA. bhārati, Av. baratti, Ar. berē, Lith. vėja, Old Russ. berei, OBul. berētū, Gk. pherei, cf. Lat. agi-t, Irish. borl-d, Goth. bairi þ, OHG. birit,
Du.	bhēr-e-tos > OIA. bhāratas, Av. baratō (barāṭo), Lith. [veza], OChSl. berete, bereta, Gk. phere-ton, Goth. baira-nd.
Pl.	bhēro-nī > OIA. bhāranti, Av. bara-inī, Ar. beren, Lith. vėja, ORuss. beratī, OBul. beratū, Gk. phērōusi, cf. Lat. agutni, Ir. berit, Goth. bairad.

4th class : *divādi* (the *ya*-class) : the root accented class without *guṇa*

To this class the *vikaraṇa ya* < IE **ie*/**io* is added between the root and the termination, the root vowel being accented without *guṇa*. It is generally intransitive in meaning, and identical with the passive suffix which is accented, e.g.,

√*naś* > *nāś-ya-ti* > *nāśyati*,

√*kup* > *kūp-ya-ti* > *kūpyati*.

In Greek this *y* of OIA appears as *z* e.g., *bluzō* (I gush forth), *brizō* (I sleep), *skhizō* (I split).

6th class : *tudādi* : the *vikaraṇa* accented class :

To this class the *vikaraṇa a* which is accented is added between the root and the termination and the root vowel is not *guṇated*, rather it remains in the weak grade :

tud + ā + ti
= *tudāti*

budh + ā + ti
= *budhāti*

diś-ā-ti
= *diśāti*

Gk. *puthō* (I rot) > *eputheto*, *puthesthai*,

Gk. *graphō* (I write),

Gk. *leipō* (I leave) > *elipon* (aor), *lipein* (infinitive)

Gk. *pheugō* (I flee) > *ephugon* (aor), *phugein* (infinitive)

Lat. *rudō* (I roar), (cf. OIA. *rud-ā-ti* beside *rōdati*)

A distinction between *bhvādi* and *tudādi* class :

<i>bhvādi</i>	<i>tudādi</i>
1. In <i>bhvādi</i> root is accented and the base of the root is <i>guṇated</i> , i.e., in the first strong grade of ablaut, e.g., IE * <i>bhéudh-o-ti</i> = <i>bódhati</i> Gk. <i>peúthei</i>	1. Whereas in <i>tudādi</i> , the <i>vikaraṇa -a-</i> is accented, and the root is not <i>guṇated</i> , i.e., is not in ablaut grade ; e.g., IE * <i>bhudh-ò-ti</i> = <i>budhāti</i> Gk. <i>puthēi</i>
2. Sometimes the same root which has <i>-a-</i> as its root vowel (since it is not	2. Whereas the same root has the accent on the <i>vikaraṇa</i> , and the root is

affected by *guṇa*) may be either *bhṛvādi* (1st class) or *tudādi* (6th class) depending on the position of accent ; e.g.,

tārati
kārṣati
sārpati

not *guṇat*, and therefore accent determines its class, e.g.,

tirāti,
kṛṣāti,
ā-sṛpat (aor)

3. Roots in the *bhṛvādi* class normally express incomplete action aspectually, e.g., OIA. *chinatti*, *cindeta* (op), Lat. *scindō*

3. Whereas, roots of the *tudādi* class both in OIA and Greek, express aorist action aspectually, e.g., *ā-chidat* < *√chid*, Lat. *scidit*.

It is a fact worth noting that for the Greek and Latin presents, the difference between *bhṛvādi* and *tudādi* is not important. In fact, in Greek the *tudādi* type of verbal forms is more prevalent in aorist than in the *bhṛvādi*.

10th class : *curādi* (the *-aya-* class) : *vikaraṇa* accented with *guṇa* of the root.

The *vikaraṇa -aya-* (IE **eje/*ejo*) is added to this class between the root and the termination, and the root vowel is *guṇat* and the first part of the *vikaraṇa* is accented. This class is, in fact, a combination of the first and fourth inserting *a* from the first (*bhṛvādi*) and *ya* from the fourth (*divādi*) making it *aya* with an accent on the first—*āya*. Originally, this class is identical with the causative formation where the suffix is—*ēje/ējo-* added to the root in the *o*-grade. In OIA it becomes *āya*. For example,

√cur > *cur* + *āya* + *ti* > *corāyati*

√pat > *pat* + *āya* + *ti* > *patāyati*. (also *pātāyati*) Gk. *potéomai*.

B. Non-thematic

2nd class : *adādi* (=root class)

In this class the personal terminations are directly added to the bare root which is the stem. It is non-thematic and

without any *vikarāṇa*. The root has the strong grade in the active singular of indicative and imperative. In other stems, the forms are in zero grade. In this class the accent is usually shifted between the root and the endings and the gradation of the root is found correspondingly. Normally when the root is gunated, it is accented, and when it is in the zero grade, the termination is accented. But this difference in accentuation is not fully observed in Greek. For example,

Present of $\sqrt{\text{as}}$, to be

3P. IE **es-ti* > OIA. *ásti*, OP. *astiy* Gk. *estí*, Lat. *est*

IE **s-tos* > OIA. *stah*

IE **s-enti* > OIA. *santi*

2P. IE **es-si* > OIA. *asi*, OP. *ahiy*, Gk. *es-stí*

IE **s-thos* > OIA. *sthaḥ*

IE **s-tho* > OIA. *stha*

1P. IE **es-mi* > OIA. *asmi*, OP. *ahmiy*

IE **s-uos* > OIA. *svah*

IE **s-mos* > OIA. *smah*, OP. *ahmahya*

**s-masi* > OIA. *smasi* (vedic)

Imperfect :

IE **ēs-ṇ* (3pl.) > OIA. *āsan*, OP. *āhan*, middle *āhantā*,

IE **ēs-ṇi* (1st. sg.) > OIA. *āsam*, OP. *āham*

Present *i* 'to go' :

IE **ei-ti* (3 sg.) > OIA. *éti*, Op. *aitiy*

IE **i-tos* (3 du.) > OIA. *itáh*

IE **i-dhi* (2 sg.) > OIA. *ihí* ; OP. *idiy* (cf. *parīdiy*)

Imperfect :

IE **e-ei-t* (3 sg.) > OIA. *ait*, OP. *-āiš* (*atīy-āiš*)

IE **e-ei-ṇ* (1 sg.) > OIA. *āyam*, OP. *āyam* (*nij-āyam*, *up-āyam*)

Present *han* (<**g^hhen*>) to smite ;

IE **g^hhenti* > OIA. *hanti*, OP. *jantiy*

Imperative :

IE **g^hh₂-dhi* > OIA. *jahi*, OP. *jadiy*

IE **g^hh₂-te* > OIA. *hata*, OP. *jatā*.

Imperfect :

IE *e-g^hent > OIA. *dhan*, OP. *ajan*

IE *e-g^hen-to (middle) > OIA. *ahata*, OP. *patiy-ajatā*

IE *e-g^hen-m > OIA. *ahanam*, OP. *ajanam*.

3rd class : *juhotyādi* (= reduplicating class)

In this class the root is reduplicated, and the syllable -a- is added to the reduplicating base in OIA, but -i- in Greek, and the accent is placed on this syllable. For example,

IE *dedōm > OIA. *dadāmi*, Gk. *didōmi*

IE *dhedhēm > OIA. *dadhāmi*, Gk. *ti-thēmi*

The Greek has many forms belonging to this class ; e.g.,

Gk. *histēmi*, OIA. *tiṣṭhāmi*,

Gk. *bi-bēti*, OIA. *jigāti*

5th class : *svādi* (= nu class) : *vikaraṇa* gunated class

To this class, the *vikaraṇa nu* (< IE *neu) is added between the root and the termination and this *vikaraṇa* is gunated (making it *nó*) and accented in the singular, but in other endings the *vikaraṇa* is neither gunated nor accented. The stem which is the root is in zero grade. For example,

OIA. *stṛ-nó-mi*, Gk. *stōrnūmi*

OIA. *stṛ-nu-más*, Gk. *stōr-nu-mes*

OIA. *su-nó-mi*, cf. Gk. *deik-nū-mi*

OIA. *su-nu-más*, cf. Gk. *deik-*, *nu-men*

The Gk. *nu-* may be due to analogy of *nā/na* as in the case of *nā/na* class, otherwise the expected form was *-neu-*.

There is a thematic *nu* class coming from IE *nue/*nuo. e.g., OIA., *ci-nva-ti* beside *cinóti*, Gk. *tinō* (I pay), Hom. *tirō* (< *tinuō), Lat. *mi-nuo* (I diminish), *sternuō* (I sneeze or I sputter).

7th class : *rudhādi* (nasal infix class)

In this class *n/na* is inserted in the middle of the root. *na* is inserted in the weak grade of the root and the termination is accented, but if *na* is in strong form, the *vikaraṇa* is accented. The stem of the root is in zero grade ; e.g.,

OIA. *yu-ná-kti* : pl. *yu-ñ-j-más*

OIA. *bhi-ná-d-mi* : pl. *bhin-d-más*

OIA. *chi-ná-d-mi* : pl. *chin-d-más*

There is a thematic *nasal* infix class where the root is in weak grade with inserted *n* and with a thematic vowel; e.g.,

IE **i_ueg-*/**i_ug-* > OIA. *yu-ñ-j-áti*, Lat. *jungit*, *jungunt*,
Lat. *iu-n-gō*, cf. Lat. *ru-m-pō* (I break).

Gk. *la-m-b-áno* (I take hold of), *pu-n-tháno-mai* (I understand).

The same formation is seen in OIA. *vi-n-dáti* (he finds).

8th class : *tanādi* (= *u* class)

The *vikaraṇa* of the *tanādi* class is *u* which is gunated and accented in the singular, and it is dropped before the suffixes beginning with *v* and *m* of the first dual and plural endings and the accent is on the termination. The *u* before a vowel ending becomes *v* or *uv*. In conjugation this is very similar with the fifth *nu*-class, i.e., the *vikaraṇa* in the strong grade receives the accent (i.e. becomes *o*); e.g.,

OIA. *tan-ú-mi* > OIA. *tanómi*, Gk. *tan-u-mai*

OIA. *tan-u-más* > OIA. *tanumás*

Gk. *án-u-mi* (I complete), *gán-u-mai* (I delight in),
ól-lu-mi (I perish) (< **ol-nu-mi*)

9th class : *kryādi* (= *nā*-class)

In this class, the *vikaraṇa* is *nā*, Gk. *nē* (< IE **nē*) and is accented in the singular, and *nī* (Gk. *nā*) (< IE **nā*, weak grade) in other terminations where the terminations are accented. The *vikaraṇa* -*n*- is added before a vowel.

OIA. *jī-nā-ti* : 1pl. *jī-nī-más*, 3pl. *jī-n-ánti*

Gk. *dám-nā-mi*, Att. *dám-nē-mi*, 1pl. *dam-nā-men*.

OIA. *yú-nā-mi* : 1pl. *yu-nī-más*

OIA. *str-nā-mi* : 1pl. *str-nī-más*, Lat. *sterno*, *ster-ni-mus*.

Here the Gk. -*na*- really represents the weak grade -*nā*-, while OIA. *nī*- instead of *nī*- is secondary.

To this class belongs another suffix *no-* or *nō*, e.g.,

OIA. *mṛ-nā-ti* (besides *mṛ-nā-ti*)

Gk. *kam-nō* (I am tired), *dák-nō* (I bite), *hamartanō* (I miss the mark)

Lat. *cer-nō* (I separate), *ster-nō* (I stretch out).

2. The Perfect Stem-system

The perfect stem-system, inherited from IE, is also characterised like the present-system by indicative, subjunctive, optative, imperative, and infinitives, participles and gerunds. It is formed in the same way from all roots irrespective of any *gaṇas*.

The conjugation of the perfect is marked by—

(i) reduplication, where vowel in the reduplicated syllable is OIA. *a*, Gk. *e* coming from IE **e*,

(ii) different terminations and variations in the termination of the verbal stem,

(iii) ablaut gradation in the perfect stem,

(iv) the active participle formed with the suffix IE **yes*.

The reduplicated perfect, with all its characteristics, is found mainly in OIA and Greek. In other IE languages, such as, Latin, Gothic, Celtic, Armenian, Albanian and Balto-Slavic, they are lost. In Latin and Gothic only a few old remnants of reduplicated perfect have survived. For example, in Latin

√*canō* (to sing) > *cecini*, √*pangō* (to fix) > *pepigi*, √*mordeō* (to cut into) > *memordi*, *cadō* (to fall) > *cecidī*, √*(re)miniſcor* (to remember) > *meninī* (cf. Gk. *mēmṇēmai*), √*donare* (to give) > *dedī*, √*tangō* (to touch) > *tetigī*, √*teneō* (to hold) > *tetini*, √*tundō* (to beat) > *tutudī*, √*tollō* (to take up) > *tetuli* and so on.

Gothic has *skáidan* (to divide) > *skatskáid-un* (1st. pl. we divided) (cf. OIA. *cicheda*, *cichidur*), √*háita* (I call) > *halháit* (I called), √*tēka* (I touch) > *taltōk* (I touched), √*fráisan* (to tempt) > *faiſfráis*, √*ga-staldan* (to possess) > *ga-stalstald*, √*áukan* (to add) > *aiáuk*.

i. Personal terminations :

The personal terminations of the perfect of both active and middle are the following :

Active				Middle		
	3p	2p	1p	3p	2p	1p
Sg	<i>a (āu)</i>	<i>tha</i>	<i>a (āu)</i>	<i>é</i>	<i>sé</i>	<i>é</i>
Du	<i>átus</i>	<i>áthus</i>	<i>vá</i>	<i>áte</i>	<i>áthe</i>	<i>váhe</i>
Pl	<i>ús</i>	<i>á</i>	<i>má</i>	<i>iré</i>	<i>dhvé</i>	<i>máhe</i>

Note : Roots ending in *ā* take *-āu* in the third and first person singular, e.g., *√pā* > *papāu*, *√sthā* > *tasthāu*, *√dā* > *dadāu*, *√dhā* > *dadhāu*. In one case the root *prā* (fill) takes *paprā* (3rd sg.) side by side with the usual form *paprāu*.

ii. Ablaut

The perfect is often guided by ablaut gradation. The active sg. is in strong grade (with accent on it), in the active dual, plural and the middle it is in weak grade (with accent on the suffix). For example, OIA. *vēda*, Gk. *oīda*, Goth. *wait* (I know), but OIA. *vid-mā*, Gk. *éd-men*, Goth. *wit-um* (we know). OIA. *da-dārśa*, Gk. *dédorka*, OIA. *ja-jāna*, Gk. *gē-gone*.

iii. Reduplication :

Generally the perfect had reduplication, though there were a few cases of unreduplicated perfect. The vowel which takes in the reduplicated syllable is OIA. *a*, Gk. *e* < IE **e*. For example :

IE **dedorkā* > OIA. *dadārśa*, Gk. *dédorka*.

IE **gēgōne* > OIA. *jajāna*, Gk. *gēgone*.

IE **sest(h)ā-* > OIA. *tasthāu*, Gk. *hesta-men*, Lat. *steti-mus*.

IE **dedore* > OIA. *dadāra*, Gk. *dédartai*.

IE **se-smer-* > OIA. *sa-smāra*, Lat. *memor* (adj) (< **me-mor-i*).

IE **g^heg^hōra* > OIA. *ja-gāra*, Gk. *bébrōtai*.

IE **teten-* > OIA. *taṭāna*, Gk. *te-tetai*, OLat. *te-tinī*.

IE **g^heg^hōme* > OIA. *ja-gāma*, Gk. *bébē-ka*.

IE **keklei-* > OIA. *śi-śrāya*, Gk. *kéklitai*.

IE **bhebhheu-* > OIA. *babhūva*, Gk. *pephūka*, Av. *bavāva*.

Unreduplicated perfect :

There are a few cases of unreduplicated perfect, though the original endings of the perfect are preserved ; e.g.,

	IE	OIA	Gk	Goth
Sg	1 * <i>uoida</i>	<i>vēda</i>	<i>oīda</i>	<i>wāit</i>
	2 * <i>uoit-tha</i>	<i>vēt-tha</i>	<i>oistha</i>	<i>wāist</i>
	3 * <i>uoidē</i>	<i>vēda</i>	<i>oide</i>	<i>wāit</i>
Pl	1 * <i>uid-men</i>	<i>vidmā</i>	<i>idmen</i>	<i>witum</i>
	2 * <i>ult-stha</i>	<i>vidā</i>	<i>iste</i>	<i>witup</i>
	3 * <i>uid-</i>	<i>vidús</i>	<i>isāsi</i>	<i>witun</i>

Roots with initial *a*-vowel plus a single consonant are formed by lengthening the vowel ; e.g.,

√*ag > IE *āge > OIA. āja, Gk. ēgmai.

√*an > IE *āne > OIA. āna (I breathe), Goth. ōg (I fear),
cf. Gk. ākhos.

√*od (smell) > IE *ōde > Gk. ódōde < (for ōde).

In the Vedas some half a dozen unreduplicated perfect forms are found ; e.g.,

√takṣ—(fashion) > takṣathur, takṣur,

√yam—(guide) > yamatur.

√nind—(blame) > nindima, ninidur.

√arh—(be worthy) > arhire.

√cit—(perceive) > cetatur.

√skambh—(prop) > skambhatur, skambhur.

iv. Moods of the Perfect

The moods of the perfect take the usual reduplication with the endings of the present stem. A few examples are given here :

Perfect Subjunctive :

√1 sg. anajā (RV. V. 51. 1)

√cit 2 sg. cikitas, 3 sg. ciketati.

Perfect Optative :

√gam : 1 sg. jagamyām, 3 sg. jagamyāt, 3 pl. jagamyur.

√bhū : 2 sg. babhūyās, 3 sg. babhūyāt.

Perfect Imperative :

√bhū : 3 sg. babhūtu.

Perfect Injunctive :

√śas : 2 sg. śaśās

√dhū : 3 sg. dūdhot.

√si (bind) : 3 sg. sise:.

v. Pluperfect

Pluperfect is an abbreviated form of the Latin word "*plus quam perfectum*" meaning 'more than perfect'. In grammar it, therefore, denotes 'that action or event which took place previous to another past action or event'. It is to be noted that pluperfect is a tense "in form, but not in meaning". In the vedic language this tense is used occasionally, though not profusely. This tense often coalesces with the imperfect of the reduplication class and with the reduplicative aorist.

The formation of the pluperfect is made in the following ways :—

(a) First, there should be an augment *a* like the imperfect and aorist, but this augment is often dropped as in other past tenses,

(b) secondly, the root should be reduplicated as in the perfect,

(c) thirdly, the personal-endings of the imperfect and aorist are added to the roots with the following exceptions :

(i) in the 3rd and 2nd person singular the *t* and *s* are preserved in some forms by an interposed *ī* as in the aorist,

(ii) in the 3rd person plural *ur* is always used in the active, while *iran* and (rarely *ran*) in the middle ;

(d) lastly, in this tense a strong stem in the singular active and a weak one elsewhere are noticed.

Macdonell says (VG §494) that there are some sixty forms which can be regarded as the forms of the pluperfect. For example, 1st sg. *acacakṣam* (<*cakṣ*), *ajagrabham* (<*grabh*), (*a*)*cakaram* (<*kṛ*) ; 3 sg. *aciket* (<*cit*), *acucyavīt* (<*cyu*), *ajagrabhīt* (<*grabh*) etc.

vi. Periphrastic Perfect

Periphrastic perfect is rarely found in the *mantra* portions of the Vedas. But in the Brāhmaṇas it is occasionally met. Periphrastic conjugation means 'a conjugation employing the simple verb with auxiliaries'. In the classical Sanskrit, it is widely and frequently used.

The formation of periphrastic perfect is made with the reduplicated perfect of $\sqrt{kṛ}$ (to make), $\sqrt{bhū}$ (to be) and \sqrt{as} (to be) with the accusative of a derivative feminine causative noun-stem in an accented \acute{a} (*kṛñcānuprayujyate* liṭi III. 1. 40). For example, *gamayāñcakāra* (AV. XVIII. 2. 27), *mantrayāmāsa* (AB, GB), *janayāmāsa* (ŚvU), *ikṣāmāsa* (ŚŚS).

3. The Aorist stem-system

The IE aorist system is fully preserved in OIA and Greek. In Latin the aorist was lost as a distinct tense, and merged with the perfect (cf. OIA. *a-vākṣam*, Gk. *édeiksa*, *ōreksa*, beside Lat. *vexī*, *dīxī*, *rēxī*). In other cognate languages also they are practically lost, except a few remnants of some old forms. For example, Gothic has a few *s*-aorist forms, e.g., Goth. *wissa*, OHG. *uissa* (he knew), pl. *wissum*.

In OIA the vedic literature is very much rich in aorist, and not classical Sanskrit. In Vedic the original meaning of aorist is preserved. "The aorist has reference to a past time indefinitely or generally, without reference to any particular time. An action done before today is expressed by the perfect or imperfect; whatever remains for the aorist is, therefore, to express a past action, done very recently, say, in the course of the current day or having reference to a present act. Aorist, therefore, merely implies the completion of an action at a past time generally, and also an action done at a very recent time."

So far as the formation is concerned, the IE had two kinds of aorist which were also reflected in OIA. And each one of these is again subdivided into various kinds. The picture is as follows :

1. Aorist :

A. Sigmatic/Athematic Weak/First aorist

1. *s*-aorist
2. *sa*-aorist
3. *iṣ*-aorist
4. *siṣ*-aorist

B. Non-sigmatic/Thematic Strong/Second aorist

1. Root-aorist
2. *a*-aorist
3. Reduplicating aorist

These two kinds of aorist are fully preserved in OIA and Greek, and partly also in Slavonic languages, but in other cognate languages they are lost, or merged with other tenses. The aorist in *then* was a special formation in Greek, not found in any other languages.

It is presumed that there was a difference in meaning between these two kinds of aorist, but it is difficult now to trace this difference in meaning.

Irrespective of any division, aorist is formed as follows :

- (i) the augment *a* (Gk. *e*) comes before the root-stem, and is accented,
- (ii) then comes the root
- (iii) then aorist markers or determinatives, and then
- (iv) the secondary terminations.

A. Sigmatic Aorist

The sigmatic aorist is the distinctive IE aorist formed from the root by the addition of *s* and the secondary suffixes. Both in OIA and Greek the IE *s*-aorist is fully represented, but with some new innovations. Originally, the IE had the following secondary endings in aorist.

	3p	2p	1p
Sg.	* <i>s-t</i>	* <i>s-s</i>	* <i>s-m̥</i>
Pl.	* <i>s-nt</i>	* <i>s-te</i>	* <i>s-men</i> / * <i>s-m̥</i>

These IE endings are found in OIA ; e.g., the OIA root *nī* (to take) is conjugated thus :

	3p	2p	1p
Sg.	<i>ánāi-s</i> (vedic)	<i>ánāi-s</i> (vedic)	<i>ánāi-sam</i>
Pl.	<i>ánāi-ṣur</i>	<i>ánāiṣṭa</i>	<i>ánāi-sma</i>

In Greek also this IE endings are preserved ; e.g., from the *lū-ō* (I loose) the *s*-aorist forms would be—

	3p	2p	1p
Sg.	<i>élūse</i> (<* <i>elūst</i>)	<i>élūsas</i> (<* <i>elūs-s</i>)	<i>élūsa</i> (<i>a</i> < <i>m̥</i>)
Pl.	<i>élūsan</i> (<* <i>elūsan</i>)	<i>elūsate</i> (< <i>elūste</i>)	<i>elūsamen</i> (<i>a</i> < <i>nt</i> > <i>an</i>)

(<**elūs-men*)

In OIA the sigmatic aorist has four types. These are—

- (i) *s*-aorist (cf. Pā. *cleḥ sic* // III. 1.44 for *aniṣ* roots).
- (ii) *sa*-aorist (cf. Pā. *śala ig upadhād aniṣaḥ* |ksaḥ/III. II. 1.45, *śliṣa āliṅgane* // III. 1.46, *na dṛśaḥ* // III. 1.47).
- (iii) *iṣ*-aorist (cf. Pā. *cleḥ sic* with *ārdhadhātukasyeḍ valādeḥ* // VII. 2.35)
- (iv) *siṣ*-aorist (cf. Pā. *yam-ram-nam-ātām sak ca* // VII. 2.73).

Some conjugations of OIA sigmatic aorist are given below :

1. *s*-aorist :

	3rd per.	2nd per.	1st per.
√ <i>ji</i> (active) :			
Sg.	<i>ajāiṣīt</i>	<i>ajāiṣiḥ</i>	<i>ajāiṣam</i>
Du.	<i>ajāiṣtām</i>	<i>ajāiṣtam</i>	<i>ajāiṣva</i>
Pl.	<i>ajāiṣuḥ</i>	<i>ajāiṣta</i>	<i>ajāiṣma</i>
√ <i>dā</i> (middle) :			
Sg.	<i>adita</i>	<i>adithāḥ</i>	<i>adiṣi</i>
Du.	<i>adiṣātām</i>	<i>adiṣāthām</i>	<i>adiṣvahi</i>
Pl.	<i>adiṣata</i>	<i>adiḍhvam</i>	<i>adiṣmahi</i>
√ <i>vi-ji</i> (middle) :			
Sg.	<i>vyajeṣṭa</i>	<i>vyajeṣṭhāḥ</i>	<i>vyajeṣi</i>
Du.	<i>vyajeṣātām</i>	<i>vyajeṣāthām</i>	<i>vyajeṣvahi</i>
Pl.	<i>vyajeṣata</i>	<i>vyajeḍhvam</i>	<i>vyajeṣmahi</i>

2. *sa*-aorist :

	3rd per.	2nd per.	1st per.
√ <i>viś</i>			
Sg.	<i>avikṣat</i>	<i>avikṣaḥ</i>	<i>avikṣam</i>
Du.	<i>avikṣatām</i>	<i>avikṣatam</i>	<i>avikṣāva</i>
Pl.	<i>avikṣan</i>	<i>avikṣata</i>	<i>avikṣāma</i>

3. *iṣ*-aorist :

	3rd per.	2nd per.	1st per.
vi /√ <i>kr</i>			
Sg.	<i>vyakārit</i>	<i>vyakāri</i>	<i>vyakāriṣam</i>
Du.	<i>vyakāriṣtām</i>	<i>vyakāriṣtam</i>	<i>vyakāriṣva</i>
Pl.	<i>vyakāriṣuḥ</i>	<i>vyakāriṣta</i>	<i>vyakāriṣma</i>

4. *siṣ*-aorist :

	3rd per.	2nd per.	1st per.
√ <i>bhās</i>			
Sg.	<i>abhāsit</i>	<i>abhāsiḥ</i>	<i>abhāsiṣam</i>
Du.	<i>abhāsiṣtām</i>	<i>abhāsiṣtam</i>	<i>abhāsiṣva</i>
Pl.	<i>abhāsiṣuḥ</i>	<i>abhāsiṣta</i>	<i>abhāsiṣma</i>

B. Non-sigmatic Aorist

The non-sigmatic aorist is of three types, and these are :

- (i) Root-aorist (cf. Pā. *gāti-sthā-ghu-pā-bhūbhyah sicaḥ parasmaipadeṣu* // II. 4.77 ; *vibhāṣā ghrā-dhet-ṣā-cchā-saḥ* // II. 4.78).
- (ii) *a*-aorist (cf. Pā. *asyāti-vakri-khyātibhyo'ñ* // III. 1.52 ; *lipi-sici-hvaśca* // III. 1.53 and the rest till 59).
- (iii) Reduplicated aorist (cf. Pā. *ñi-ñri-dru-srubhyah kartari cañ* // III. 1.48 ; *vibhāṣā-dhet-śvyah* // III. 1.49).

5. root-aorist

The root-aorist is formed with the augment plus the root and the terminations ; e.g., IE **e-g^w-ēt* > OIA. *agāt*, Gk. *ébē* ; IE **ébhūt* > OIA. *abhūt*, Gk. *éphū* ; IE **é-drā-t* > OIA. *á-drāt*, Gk. *édran* ; IE *é-plēt* > OIA. *aprāt* (he filled), Gk. *(e)plēto* (Hom.)

Roots of monosyllabic have strong grade of ablaut in the active sg., but weak grade in the dual, plural and the middle. For example, OIA. *ádām*, Gk. **édōn*, OIA. *ádham*, Gk. **ethēn*, OIA. *asthām*, Gk. *éstēn*, Dor. *éstān*, but, OIA. *ádāma* (for **adima*), Gk. *édomen* ; OIA. *ádhāma* (for **adhima*), Gk. *ēthemen* ; OIA. *asthāma* (for **asthima*), Gk. *éstāmen* with *ā* instead of *i* levelled out from the singular. The regular form with *i* occurs in the middle, e.g., OIA. *ádita*, Gk. *édoto*.

Some conjugations of root aorist are given below :

gā (to go)

sthā (to stand)

(cf. Pā. *īḡo gā luñi* // II. 4.45)

	3p	2p	1p		3p	2p	1p
Sg.	<i>agāt</i>	<i>agāh</i>	<i>agām</i>		<i>asthāt</i>	<i>asthāh</i>	<i>asthām</i>
Du.	<i>agātām</i>	<i>agātam</i>	<i>agāva</i>		<i>asthātām</i>	<i>asthātam</i>	<i>asthāva</i>
Pl.	<i>aguḥ</i>	<i>agāta</i>	<i>agāma</i>		<i>asthuh</i>	<i>asthāta</i>	<i>asthāma</i>

<i>dā</i> (to give)			<i>dhā</i> (to hold)			
Sg.	<i>adāt</i>	<i>adāḥ</i>	<i>adām</i>	<i>ādhāt</i>	<i>adhāḥ</i>	<i>adhām</i>
Du.	<i>adātām</i>	<i>adātam</i>	<i>adāva</i>	<i>adhātām</i>	<i>adhātam</i>	<i>adhāva</i>
Pl.	<i>aduh</i>	<i>adāta</i>	<i>adāma</i>	<i>adhuh</i>	<i>adhāta</i>	<i>adhāma</i>
<i>pā</i> (to drink)			<i>bhū</i> (to be)			
Sg.	<i>apāt</i>	<i>apāḥ</i>	<i>apām</i>	<i>abhūt</i>	<i>abhūḥ</i>	<i>abhūvam</i>
Du.	<i>apātām</i>	<i>apātam</i>	<i>apāva</i>	<i>abhūtām</i>	<i>abhūtam</i>	<i>abhūva</i>
Pl.	<i>apuh</i>	<i>apāta</i>	<i>apāma</i>	<i>abhūvan</i>	<i>abhūta</i>	<i>abhūma</i>

6. *a*-aorist

The *a*-aorist is formed with the augment *a* (Gk. *e*, IE **e*) plus the root and the marker *a* and then the terminations; e.g., OIA. *avidāt*, Gk. *idon* (*idein* infinitive), Arm. *egit*; OIA. *aricat*, cf. Gk. *ēlipon*, Arm. *elik*; OIA. (*a*)*dr̥śan*, Gk. *ēdrakon*; OIA. *budhantu*, Gk. *ēputhonto*; OIA. *adaśat*, Gk. *ēdakon*, OIA. *abhūjat*, Gk. *ēphuge*.

Some conjugations of *a*-aorist are given below :

gam (to go) :

	3p	2p	1p
Sg.	<i>agamat</i>	<i>agamah</i>	<i>agamam</i>
Du.	<i>agamatām</i>	<i>agamatam</i>	<i>agamāva</i>
Pl.	<i>agaman</i>	<i>agamata</i>	<i>agamāma</i>

7. Reduplicated aorist

The reduplicated aorist is different in nature from the other aorists. It is akin, on the one hand, to the imperfect of reduplicating class and to the so-called pluperfect class on the other. It is conjugated with *aya* as coming from causative. The reduplicated aorist is formed with augment plus the reduplication of the root plus *aya* and the terminations. In Greek, the reduplicated aorists are not many; e.g., *ēgagon* (<*ēgō*, to drive), *ekēkleto* (<*kēlōmai*, to call), *lēlathon* (<*lēthō*, to make forget). In origin OIA *āvocam* (<**ā*-*va*-*uc*-*am*) from IE **e*-*ue*-*uq*²-*om* <**uq*² the weak grade of *ueq*², OIA. *vac-*, Gk. *ep-in*, *ēpos*, Gk. *eipon*, Hom. *ēeipon* (<**e*-*Fe*-*F* *pon*) belongs to the reduplicated aorist class.

Some conjugations of the reduplicated aorist are given below :

Active

śri (to resort) :

	3p	2p	1p
Sg.	<i>aśiśriyat</i>	<i>aśiśriyaḥ</i>	<i>aśiśriyam</i>
Du.	<i>aśiśriyatām</i>	<i>aśiśriyatām</i>	<i>aśiśriyāva</i>
Pl.	<i>aśiśriyan</i>	<i>aśiśriyata</i>	<i>aśiśriyāma</i>

dru (to run) :

Sg.	<i>adudruvat</i>	<i>adudruvaḥ</i>	<i>adudruvam</i>
Du.	<i>adudruvatām</i>	<i>adudruvatām</i>	<i>adudruvāva</i>
Pl.	<i>adudruvan</i>	<i>adudruvata</i>	<i>adudruvāma</i>

sru (to flow) :

Sg.	<i>asusruvat</i>	<i>asusruvaḥ</i>	<i>asusruvam</i>
Du.	<i>asusruvatām</i>	<i>asusruvatām</i>	<i>asusruvāva</i>
Pl.	<i>asusruvan</i>	<i>asusruvata</i>	<i>asusruvāma</i>

kṛt (to cut) :

Sg.	<i>acikīrtat</i>	<i>acikīrtaḥ</i>	<i>acikīrtam</i>
Du.	<i>acikīrtatām</i>	<i>acikīrtatām</i>	<i>acikīrtāva</i>
Pl.	<i>acikīrtan</i>	<i>acikīrtata</i>	<i>acikīrtāma</i>

jan (to give birth) :

Sg.	<i>ajījanat</i>	<i>ajījanaḥ</i>	<i>ajījanam</i>
Du.	<i>ajījanatām</i>	<i>ajījanatām</i>	<i>ajījanāva</i>
Pl.	<i>ajījanan</i>	<i>ajījanata</i>	<i>ajījanāma</i>

Middle

Sg.	<i>ajījanata</i>	<i>ajījanathāḥ</i>	<i>ajījane</i>
Du.	<i>ajījanetām</i>	<i>ajījanethām</i>	<i>ajījanāvahi</i>
Pl.	<i>ajījananta</i>	<i>ajījanadhvam</i>	<i>ajījanāmahi</i>

Moods of the aorist

Like the perfect, the aorist has also moods of all types of aorist. They are found only in the Vedic. They are formed exactly in the same manner with the endings of the moods of the present stem. For example,

Types	Subjunctive	Optative	Imperative	Injunctive
(i) <i>s-</i>	<i>neṣati</i> (3s < nī) <i>jeṣati</i> (3s < jī) <i>stoṣāni</i> (1s < stu)	<i>diṣīya</i> (1s < dā, cut) <i>bhakṣīya</i> (1s < bhaj)	<i>neṣa</i> (2s < nī) <i>parsā</i> (2s < pr)	<i>jes</i> (2s < jī) <i>stoṣam</i> (< stu)
(ii) <i>sa-</i>	—	—	<i>dhukṣasva</i> (2s < duh)	<i>dhukṣata</i> (2s, mid. < duh)
(iii) <i>iṣ-</i>	<i>kāriṣat</i> (3s < kṛ) <i>tāriṣat</i> (3s < tṛ)	<i>janīṣīyā</i> (1s. (m) < jan) <i>edhiṣīyā</i> (1s. (m), < edh)		<i>dhukṣanta</i> 3p, mid. < duh)
(iv) <i>siṣ-</i>	<i>yāsiṣat</i> (3s < yā) <i>gāsiṣat</i> (3s < gā)	<i>yāsiṣiṣthās</i> (2s, (m) < yā) <i>vaṃsiṣīyā</i> (1s, (m) < van win)	<i>yāsiṣtam</i> (2d < yā) <i>yāsiṣta</i> (2p)	<i>tārīt</i> (< tṛ) <i>hāsiṣur</i> (3p, < has)
(v) <i>root-</i>	<i>karati, karat</i> (3s) <i>gamāni</i> (1s) <i>gamat</i> (3s)	<i>gamyās</i> (2s) <i>bhūyāt</i> (3s) <i>bhūyāma</i> (1pl.)	<i>kṛdhi,</i> <i>śrudhi,</i> <i>gadhi,</i> <i>bhūtu</i>	<i>karam</i> (1s) <i>gām</i> (1s) <i>bhūt</i> (3s)
(vi) <i>a-</i>	<i>mucāti</i> (3s) <i>gamātha</i> (2p)	<i>gameyam</i> (1s) <i>games</i> (2s) <i>gamet</i> (3s)	<i>muca</i> (2s) <i>kara</i> (2s) <i>karatām</i> (3p)	<i>mucat</i> (3s) <i>gamam</i> (3p)
(vii) <i>redu- plicated</i>	<i>vacā</i> (1s) <i>vacāsi</i> (2s) <i>vacātī</i> (3s)	<i>voceyam</i> (1s) <i>voces</i> (2s) <i>vocet</i> (3s)	<i>vocatāt</i> (2s) <i>vocatam</i> (2d) <i>vocata</i> (2p) <i>vocatu</i> (3s)	<i>vocam</i> (1s)

4. The Future stem-system

The future stem-system seems to be a later addition to the system from future tense. It has mainly conditional and participles. As a system, it is not complete in conjugational pattern like the other stem-systems.

This stem is formed by the addition of *-sya* < IE **sio* with the connecting vowel *-i-* making it *-i-sya-* to the root and the base is gunated. Brugmann thinks that this *-isya* has come from *iṣ*-aorist.

In the RV the future tense does not occur frequently, its purpose being served either by subjunctive (which has a future sense) or by the present indicative. The future subjunctive has only one form *kariṣyās*. The future is inflected in both active and middle.

Future Indicative

The future indicative of the root *kṛ* is given below to understand the pattern of its conjugation :

	Active		
	3p	2p	1p
Sg.	<i>kariṣyati</i>	<i>kariṣyasi</i>	<i>kariṣyāmi</i>
Du.	<i>kariṣyataḥ</i>	<i>kariṣyathas</i>	<i>kariṣyāvaḥ</i>
Pl	<i>kariṣyanti</i>	<i>kariṣyatha</i>	<i>kariṣyāmaḥ</i>
	Middle		
Sg	<i>kariṣyate</i>	<i>kariṣyase</i>	<i>kariṣye</i>
Du.	<i>kariṣyete</i>	<i>kariṣyethe</i>	<i>kariṣyāvahe</i>
Pl.	<i>kariṣyante</i>	<i>kariṣyadhve</i>	<i>kariṣyāmahe</i>

Future Conditional

Only one occurrence of future conditional is found in the RV. From the root *bhṛ* we have *abhar-i-ṣyat* 'he was going to bear off'.

Periphrastic Future

The periphrastic future used with an auxiliary *√as* is formed by the *nomen agentis* by the suffix *tr > tar* added either directly to the root or with a preceding vowel *i*, the root vowel being gunated, and the accent falls on the suffix ; e.g., *bhū + tr > bhavitṛ*, *dā + tr > dātṛ*, *kṛ + tr > kartṛ*.

In the third person in all the numbers the periphrastic future is used without any auxiliary, but in the first and second persons, the present of the root \sqrt{as} is used as auxiliary. For example, the $\sqrt{dā}$ is conjugated thus :

	3p	2p	1p
Sg.	<i>dātā</i>	<i>dātāsi</i>	<i>dātāsmi</i>
Du.	<i>dātārāu</i>	<i>dātāsthas</i>	<i>dātāsvas</i>
Pl.	<i>dātāras</i>	<i>dātāstha</i>	<i>dātāsmas</i>

III. Formation of the Moods

1. The Subjunctive

The IE subjunctive (i.e. the Vedic *let*) is preserved in OIA (vedic only), Greek and Latin, but in classical Sanskrit, it is lost, and its place was taken by optative. So also is the case with the Germanic and Balto-slavic languages.

The subjunctive is formed by the modal suffix added to the root and the personal terminations of both active and middle.

The modal suffix of the subjunctive is of two types depending on the stems. For the thematic stems, the subjunctive is formed by the suffix IE $*\bar{e}/*\bar{o} > \text{OIA. } \bar{a} \text{ Gk. } \bar{e}, \bar{o}, \text{ Lat. } \bar{a}, \bar{e}$. Owing to the difference between Greek and Latin, it is somehow assumed that originally it was a combination of the stem vowel $*e/*o$ with the $*e/*o$ of the subjunctive of the unthematic stem, and IE $*\bar{e}/*\bar{o}$ is a contraction of the two which is found in Greek \bar{e}/\bar{o} , but Latin has generalized as \bar{e} .

The suffix of the unthematic stem is IE $*e/*o > \text{OIA. } a, \text{ Gk. } e/o \text{ (later } \bar{e}/\bar{o}), \text{ Lat. } \bar{o}, ; \text{ e.g., OIA. } as-a-t \text{ (< } asti), \text{ Gk. } iomēn \text{ (Hom.), Lat. } erō$.

The endings of the subjunctive are the following :

Active			Middle		
3p	2p	1p	3p	2p	1p
Sg. <i>a-ti, a-t</i>	<i>a-si, as</i>	<i>āni, ā</i>	<i>a-te, a-tāi</i>	<i>āse, a-sāi</i>	<i>-āi</i>
Du. <i>a-tas</i>	<i>a-thas</i>	<i>āva</i>	<i>āi-te</i>	<i>aithe</i>	<i>ā-vahāi</i>
Pl. <i>a-n</i>	<i>a-tha</i>	<i>āma</i>	<i>an-te,</i>	<i>a-dhve</i>	<i>ā-mahāi</i>
			<i>a-nta</i>	<i>a-dhāi</i>	<i>ā-mahe</i>

The subjunctive mood is found in all the stem-systems. In the present stem-system it occurs in both thematic and athematic stems. In the thematic present, the modal suffix *-ā* is added as in the following of the root *bhar* :

Sg.	<i>bhārā-t(i)</i>	<i>bhārāsi</i>	<i>bhārā-ni</i>
Pl.	<i>bhārān</i>	<i>bhārātha</i>	<i>bhārāma</i>

But in Greek

Sg.	<i>phērēi</i>	<i>phērēis</i>	<i>phērō</i>
Pl.	<i>phērō-nti</i>	<i>phērē-te</i>	<i>phērō-men</i>
	(< <i>phērō-si</i>)		

In Latin, it is *ā*, e.g.,

ferā-mus, *ferā-tis* beside the fut. *ferē-mus*, *ferē-tis*.

In the athematic we have subjunctives like *√yuj* > *yunājat* (3 sg.), *yunājan* (3 pl.), *yunājate* (3 sg. middle).

Some examples of perfect subjunctives are—

√cit > *ciketati* (3 sg.), *ciketat* (3 sg.), *√gr* > *jirgurat* (3 sg.),
√mr > *mumurat* (3 sg.).

Some aorist subjunctives are—

√stu > *stoṣāni* (1 sg.),
√dṛ > *darṣasi* (2 sg.), *√ji* > *jeṣas* (2 sg.), *√vah* > *vakṣas* (2 sg.)
√nī > *neṣati* (3 sg.), *√pā* > *pāsati* (3 sg.) *√ji* > *jeṣat* (3 sg.).

2. The Optative

In IE, the optative was formed in two ways depending on the stems being thematic and athematic. In the thematic base the suffix is **i-* which when added to the *-o-* vowel becomes *-oi-*, and the athematic suffix is **i-je*, **-ī* (a weak grade of **je*). In both the types, the secondary personal terminations are added.

The thematic type of optative is preserved in OIA, Greek and also in Germanic languages ; e.g.,

	IE.	OIA.	Gk.	Goth.
Sg. 3	<i>*bhéroit</i>	<i>bhāret</i>	<i>phéroī</i>	<i>báirái</i>
2	<i>*bhérois</i>	<i>bhāreḥ</i>	<i>phérois</i>	<i>bairāis</i>
1	<i>*bhéroṯ-ṃ</i>	<i>bhāreyam</i>	<i>phéroimi</i>	<i>bairáu</i>

	IE.	OIA.	Gk.	Goth.
Du. 3	*bhéroī-tām	bhāretām	pheroltōn	...
2	*bhéroī-tom	bhāretam	phéroiton	...
Pl. 3	*bhéroī-nt	bhāreyur	phéroien	baīrdina
2	*bhéroī-te	bhāreta	phéroite	baīraiþ
1	*bhéroī-m-	bhārema	phéroimen	baīraīma

The athematic type of optative is found in the following conjugation of the root *-as* :

	IE.	OIA.	Gk.	O. Lat.
Sg. 3	*s-(i)ṛē-t	syāt	elē	siet
2	*s-(i)ṛē-s	syāh	elēs	sies
1	*s-(i)ṛē-m	syām	elēn	siem
Pl. 3	*s-(i)ṛēnt	syūr	eīen	sient
2	*s-ī-te	syāta	eīte	sītis
1	*s-ī-m-	syāma	eīmen	sīmus

In all the three stems the optative mood is found.

Perfect optative : √gam > jagamyām (1 sg.), jagamyātām (2 du), jagamyur (3 pl.)

√ric > riricyām (1 sg.), riricyāt (3 sg.)

Aorist optative : √gam > gameyam (1 sg.), gamet (3 sg.), gamema (1 pl.)

√dṛś > dṛśeyam (1 sg.), dṛśema (1 pl.)

3. The Imperative

In IE, the imperative is formed in three ways :

(i) by bare stem of the thematic base, (ii) by the suffix IE *dhi > OIA. dhi (vedic), hi, Gk. thi, and (iii) by the suffix IE *tōd > OIA. tād, Gk. tō, Lat. tō

(i) The second person sg. of the thematic base is expressed by the bare stem ; e.g.,

IE *bhère > OIA. bhāra, Gk. phère, Goth. baīr.

IE *g*mske > OIA. gaccha, Gk. báske, cf. Lat. age.

(ii) By the suffix IE *dhi > OIA. dhi (vedic), hi, Gk. -thi, added to the athematic base ; e.g.,

IE *es-dhi > IIr. *az-dhi, OIA. edhi, Av. zdī Gk. isthi.

IE *kludhi > OIA. śrudhi (vedic), Gk. kluthi

IE **i-dhi* > OIA. *idhi* (vedic), Cl. *i-hi*, Gk. *i-thi*

IE **pō-dhi* > OIA. *pā-hi*, Gk. *pō-thi*, *pī-thi*.

(ii) By the suffix *tād* (< IE **tōd*) ; e.g.,

OIA. *bharatād*, Gk. *pherētō*

OIA. *vocatād*, Gk. *eipētō*

OIA. *vahatād*, Lat. *vehitō*

OIA. *dat-tād*, Gk. *dō-tō*, Lat. *da-tō*

Gk. *agetō*, Lat. *agītō*

Gk. *mématō*, Lat. *mementō*.

4. The Conditional/Conjunctive

The formation of the conditional is made by prefixing an augment *a* (Gk. *e* < IE **e*) before the root and a modal suffix *-sya* (< IE **sīo*) from the future and then the secondary endings ; e.g., *a-bhav-i-sya-t*, *a-kar-i-syat*, *a-bhar-i-sya-t*. Scholars tag this mood to the future stem-system only.

Historically, the conditional seems to be a later development. Except one example (*abhariṣyat*), it does not occur in the RV and none in the other Vedic texts. Except in ŚB (where fifty instances are found), it is hardly common in the Brāhmaṇas. In the Mahābhārata it occurs twenty-five times from thirteen roots. It does not occur in the *Gītā*, *Hitopadeśa* and many of the classical literature. It occurs twice in the *Śakuntalā*—*kiṃ vābhaviṣyad aruṇas tamasām vibhettā, taṃ cet sahasra-kiraṇo dhuri nākariṣyat* (VII. 4), “Or would Aruṇa have become the destroyer of darkness, if the thousand-rayed sun had not placed him on the yoke ?”

“It stands related to the future, in form and meaning, as the French conditional *aurait* to the future *aurai*, or as the English *would have* to *will have*—nearly as the German *würde haben* to *werde haben*”. [SG. §940a.]

5. The Benedictive/Precative

“This is a form of the optative which adds an *-s* after the modal suffix in several persons, and is made almost exclusively from aorist stems. In the RV there occur a few forms of the

precativ in three persons (1. 3 sing, 1 pl.) active, and in two persons (2. 3 sing.) middle ; thus active : 1 sing. *bhū-yā-s-am* (aor) 'may I be' ; 3 sing. *aś-yās* (for **aś-yā-s-t*) 'may he attain' (aor) ; *babhū-yās* 'may he be (pef.)' ; 1 pl. *kri-yās-ma* 'may we do' (aor) ; middle : 2 sing. *maṃ-s-ī-ṣ-thās* (aor) and 3 sing. *maṃ-s-ī-ṣ-ta* (aor), from *man-* 'think'." [VG. §417].

6. The Injunctive

The OIA injunctive, inherited from IE, is formed with the unaugmented indicative plus the secondary personal terminations. It is fully preserved in vedic, but in classical Sanskrit it is preserved in the imperative forms with the negative particle OIA. *mā* (= Gk. *mē*) to express strong prohibitions, e.g., *mā bhāṣīṣh* 'do not fear at all', *mā kāṣīṣh*, 'do not do at all'.

The injunctive (= past indicative + subjunctive) is used with an indicative and subjunctive meaning. In all the three stems, there were injunctive forms. Thus we have for example :

Present injunctive : OIA. *bhārat*, Gk. *phère*, beside *ābharat*,
Gk. *ēpherete*

OIA. *bhārata*, Gk. *phērete*, beside *ābharata*, Gk. *ēpherete*

Aorist injunctive : OIA. *dhāḥ*, Gk. *thēs* (<**thēs*), beside
ā-dhāḥ.

OIA. *dāḥ*, Gk. *dōs* (<**dōs*) beside *ā-dāḥ*.

Perfect injunctive : OIA. *dūdhot* (<*dhū*).

OIA. *siset* (<*si*).

IV. Secondary Conjugation

The secondary conjugation is the derivative formations of verbs. It is conjugated like the present stem-system. The forms in other stem-systems are exceptionally rare. The secondary verbs are the passive, causative, denominative, desiderative and frequentative.

1. Passive

The passive is formed by adding the accented *-yā* (<IE **ió*/**iē*) suffix to the root which is in the weak grade, losing a

nasal and taking a *saṃprasārāṇa*. The personal terminations are the same with the middle. While conjugated the final vowels undergo some changes ; i.e., *ā* > *ī*, *dā* > *diyāte* ; *i* and *u* > *ī* and *ū*, *mi* > *mīyāte*, *su* > *sūyāte*, *r* and *ṛ* > *ri* and *īr*, *kṛ* > *kriyāte*, *śṛ* > *śīryate*.

There are some exceptions to this rule as well, e.g., *jñā* > *jñāyāte*.

In the *divādi* class where *ya* is added to the root, the root is accented without any *guṇa* of the radical vowel of the verb, whereas in the passive the suffix *-yā* is accented ; e.g., *pācyate* and *pacyāte*, *jīyate* and *jīyāte*, etc.

2. Causative

OIA has inherited IE causative system. The formation of the causative suffix is **éio/*éie* added to the root. The suffix **éio/*éie* becomes *āya* in OIA. For example, OIA. *pātáyāmi*, Gk. *potéomai* for OIA. *pātāmi*, Gk. *pétomai*.

The conjugation of IE **sed* > OIA *sad* is given below :

IE **sod-éie-ti* > OIA. *sādáyati*, Goth. *sat-jīþ*

IE **sod-éio-nti* > OIA. *sādáyanti*, Goth. *sat-jand*

IE **sod-éie-si* > OIA. *sādáyasi*, Goth. *sat-jis*

IE **sod-éie-the* > OIA. *sādáyatha*, Goth. *sat-jīþ*

IE **sod-éiō-mi* > OIA. *sādáyāmi*, Goth. *sat-ja*

IE **sod-éio-mes* > OIA. *sādáyāmas*, Goth. *sat-jan*

The causative verbs have also moods and non-finite verbal forms.

3. Denominative

Denominative verbs can be formed from all kinds of nominal stems with the suffix **iō/*iē* added to the bare stem, and the suffix **iō/*iē* was originally accented. And this system of accentuation was preserved in OIA. The formation of the denominative verbs is identical with the primary **iō* presents except the accent which falls on the final syllable of the root.

Denominative verbs are of two types depending on the words ending in a vowel or a consonant. If the words end in

a vowel like *ā, i, u*, the suffix would be **āiō, *eiō, *iiō, *uiō*. The denominatives in **-eiō* (OIA. *ayā*, Gk. *eō*, Lat. *eo*) were formed from *o*-stems, e.g., *deva-yā-mi* (<*deva*), 'I behave like gods', *amitra-yā-mi* (<*amitra*), 'I behave like an enemy', Gk. *philēō* (<**phileiō*), *phobēō*, *tropēō*, Lat. *albeo*.

IE **iiō* > OIA. *īyā*

OIA. *jani* > *jani-yā-ti* (he seeks a wife)

OIA. *sakhi* > *sakhī-yā-ti* (he behaves like a friend)

Gk. *konlō* (<*koniō*), *mēiō*

Lat. *finio*, *tēnio*

IE **uiō* > OIA. *ūyā*

OIA. *gātu* > *gātu-yā-ti* (he sets in motion),

śatru > *śatru-yā-ti* (he behaves like an enemy).

To the consonantal stem **iō* is directly added; e.g., *apas* > *apas-yā-ti*, (he is active), *apas-yāmi* (I am active).

From *deva* the conjugation of denominative verb will be as follows :

Sg. <i>*iē ti</i> : <i>devayāti</i>	<i>*iē-si</i> : <i>devayāsi</i>	<i>*iē-mi</i> : <i>devayāmi</i>
Pl. <i>*iō-nti</i> : <i>devayānti</i>	<i>*iē-the</i> : <i>devayātha</i>	<i>*iō-mes</i> : <i>devayāmas</i>

The denominative verbs have also different moods, infinitives and participles.

4. Desiderative

Desiderative-expresses a desire for the action. The desiderative stem is formed by reduplication, which always has the accent, and by inserting *sa*, sometimes *i* before it, making it *īsa* plus the usual terminations of the present-stem; e.g., *√pā* > *pībāmi*, *pīpāsāmi*, *√jī* > *jīvāmi*, *jījīviṣāmi*.

The desiderative verbs are conjugated like the present-stem system in all moods, tenses, infinitives, participles and gerunds. Its perfect is formed periphrastically.

In the RV the desiderative conjugation is extremely rare as in Homer who has used only a few forms with the suffix *-seiō* and *īe(o)*, such as, *opseīontes* (Il. XIV. 37) 'going to see', *draineis* (Il. X. 96) 'you are for doing'.

The desiderative forms are available from the Brāhmaṇas onwards.

5. Frequentative/Intensive

The frequentative (also called intensive) conjugation is common in the RV and partly also in the Brāhmaṇas and Sūtra texts. In the AV they are less common, and in the later language, they are very rare.

The formation of frequentative is made by reduplication (where $a > ā$, $i > e$, $u > ō$) plus the terminations; e.g.,

$\sqrt{\text{vid}} > vēvedmi, vēvidimi, \sqrt{\text{jhu}} > jōhavīmi, bhū > bōbhavīti, bōbhūyate.$

The conjugation follows the present stem-system. So it has all the moods, tenses, participles like the present.

In Greek frequentative or intensive verbs are formed differently. Intensive verbs are reduplicated and express intensive action by repetition. They are mostly reduplicated verbs of the first class, e.g., *pam-phainōn* (gleaming), *bambainōn* (staggering) *marmatrontes* (glittering), *dei-dissesthai* (to terrify) etc. Frequentative verbs are not reduplicated, but express 'habitual action' by the suffixes, *-taō*, *teō* and *tazō*: e.g., *eukhetāomai* (I wish), *oinopo-tázō* (I quaff wine).

V. Non-finite

The non-finite forms are verbal nouns; they have double functions—verb plus substantive or adjective. Like finite they are not limited by person, number, and voice, or by any so-called tense-system; and hence are called non-finite. The OIA non-finite can be arranged according to the stem-system thus:

	Substantive	Adjectival	Indeclinables
Stem-system	Infinitive	Participles	Gerunds
Present	<i>tum(un)</i>	<i>śatṛ (= at/ant)</i> <i>śānac (= āna)</i> <i>cānaś (= āna)</i>	<i>(ṇ)am(ul)</i>
Aorist	„	<i>(k)ta</i> <i>(k)tavat(u)</i>	<i>(k)tvā</i>
Perfect	„	<i>(k)vas(u)</i> <i>(k)āna(c)</i>	<i>(l)ya(p)</i> <i>tya(p)</i>
Future		<i>syatṛ (= syat-/nt)</i> <i>syamāna (syamāna)</i>	...
Passive		<i>tavya, anīya, (ṇ)ya(t)</i> <i>ya(t), (k)ya(p)</i>	...

1. Infinitive

In IE the infinitives were originally isolated singular case-forms of nouns. Gradually these noun case-forms were added to the verb. As a result the infinitives have double functions—noun and verb combined. As it is noun in form, it loses its distinction between active, middle and passive.

In IE there were many infinitive forms, and so there is no agreement between OIA and Greek, or between Greek and Latin, and so on. Yet, there are exceptionally a few infinitive forms which can be traced from the common IE source. In most of the cognate languages, they grew up independently.

In Greek there are many forms of infinitive which are either dative or locative. From athematic active stems the dative infinitives are *-menai*, *-emenai*, *nai*, *enai*, *sai* and the middle *-s-thai*. The athematic locative infinitives are *-men*, *mēn* (Cret.), *mein* (Rhod.). The thematic locative infinitives are *-ein* (Att. Ion.), *ēn* (dialectal), *en* (also dialectal), *e-ein* (Homeric as in *idēein*). Of these, *menai* corresponds to Vedic *-mane*, e.g., Gk. *dōmenai*, OIA. *dāmane*; Gk. *idmenai*, OIA. *vidmāne*, and *-sai* to OIA *-se*, e.g., Gk. *deiksai*, *lusai*, cf. OIA. *ji-se* (to conquer), *stu-se* (to praise). Att. Gk. *dōnai*, Cypr. *doFenai* may belong to Vedic *dāvāne*. The Greek suffix *-ein* (<*esen or *eien), a locative sg. without ending, may be compared with Vedic *-sani* as in *ne-śān-i* (<*nī*, to lead), *sak-śān-i* (<*sak*, to abide), cf. Lat. *dare* (<*da-s-i). The middle athematic dative ending *-s-thai* is probably related to Vedic *-dhyāi* or *-dhye* as in Vedic *dhiya-dhyāi* (to deposit), *gama-dhye* (to go).

The Latin infinitives are accusative (supine *tu-m* = OIA. *tu-m*), dative (present passive *-ī/-rī*), locative (active present *se/re* <*si), perfect *isse* (<*is-se*), future *tūrum* (<supine *tū* + *erom) or periphrastic *tūrum esse*, passive perfect *tus (esse)*, future *-tum irī*).

In Gothic the infinitive is restricted to the accusative only (= Goth. *-an*, Old Icel. *-a*). The suffix *-an* (<*ono-m (*m* being the nom. acc. neut. ending) became generalized in PGem., e.g., Goth. *nim-an* (to take) (<*nem-ono-m), *hāitan* (to call).

As infinitives are case-forms, we have accusative, dative, ablative, genitive and locative infinitives in Vedic. Of all these forms, only *tu-m* (acc. inf.) is survived in classical Sanskrit. The rest are available in Vedic only. The formations of the infinitive, according to case-forms, are given below :

Cases	Case-form	when added to the stems	examples
Accu- sative	-am -tu-m (cf. Lat. supine -tum)		OIA. samidh-am, yúdh-am (to fight) cf. Goth. nim-an (to take) OIA. at-tum (to eat)
Dative	-e	consonants ā + > āī as + > ase tu + > tave tavā + > tavāī tyā + > tyāī dhyā + > dhyāī (Gk. s-thai) man + > mane van + > vane	OIA. yuj-e (to yoke), bhuj-e, dr̥ṣ-e, mud-e, cakṣ-e, dā-man-e Gk. dô-men-ai (Hom.) cf. Lat. legimini (2p pass imp.) OIA. dā-van-e (to give) OIA. vi-khyāī, parādāī OIA. cakṣas-e, r̥cas-e OIA. é-tav-e, at-tav-e (to eat) OIA. é-tavāī, gan-tavāī OIA. i-tyāī OIA. gama-dhyāī, cf. Gk. lüesthai OIA. dā-man-e Gk. dô-men-ai (Hom.) OIA. dā-van-e (to give)
Ablative	-as		OIA. pad-as (from falling down)
Geni- tive	tos		OIA. karītōs (doing) dā-tos (giving)
Loca- tive	-i	-tar + > tari -san + > sani	OIA. sam-cakṣ-i, cf. Lith. dú-ti, OChSl. da-ti (to give) OIA. dhar-tar-i (to support) OIA. sak-śán-i (to abide), ne-san-i (to lead), je-ši (to conquer), cf. Lat. dāre < dar-i

Accusative Infinitive

The accusative infinitive is formed in two ways—with *-am* and *-iṁ*.

The *-am* form is used to the root ending in consonant, the root being in its weak form; e.g., *sam-ldh-am* 'to kindle', *pra-tīr-am* 'to prolong', *pra-mly-am* 'to neglect', *ā-rabh-am* 'to reach', *yudh-am* 'to fight'.

The *-tum* form does not occur profusely in the RV, but it is the common infinitive of the classical Sanskrit. The actual infinitive form is *-tu* and *m* is the accusative ending. This infinitive is also survived in Latin supine in *-tum* (acc. sg.). For example, *āt-tum* 'to eat', *kār-tum* (to do), *dā-tum* 'to give'. When *-tum* is added either directly or with the preceding vowel *i* (= *i-tum*), the root is guṇated and is accented; e.g., *bhū + tum* > *bhāv-i-tum*, *car + tum* > *cār-i-tum*, *i + tum* > *ētum*.

Dative Infinitive

The Vedic literature is completely inundated with dative infinitive ending in *-e* which when added to the *ā* of a root becomes *-āi*. It is the common infinitive in Vedic whose original meaning is dative 'in order to', 'for the purpose of'. For example,

1. *-e*: *cakṣ-e*, 'to see', *dṛś-e* 'to see', *bhuj-e*, 'to enjoy', *mud-e*, 'to rejoice', *mah-e* 'to be glad', *yuj-e* 'to yoke', *ruc-e* 'to shine' *bhuv-e*, *bhv-e* 'to be'.
2. *-āi*: *vi-khyāi* 'to look abroad', *parā-dāi* 'to give up', *yāi* 'to go', *ava-sāi* 'to rest', *prati-māi* 'to imitate.'

Apart from the dative infinitive suffix *-e*, there are other dative infinitives which are formed from verbal noun with the suffix *-e*, such as, *-se*, *-as-e*, *tu-e* = *tav-e*, *tavāi*, *āhyāi*, *-man-e*, *-van-e*, etc. [cf. Pā. *tumarthe se-sen-ase-asen-kase-kasen-adhyāi-adhyāin-kadhyāi-kadhyāin-śadhyāi-śadhyāin-tavāi-taveṇ-tavenaḥ* || III. 4. 9]. For example,

1. *s-e*: Only three forms are available, e.g., *ji-ś-e* 'to conquer', *upa-prak-ś-e* 'to unite', *stu-ś-e* 'to praise'.

2. *as-e*: More than 25 roots are formed with this suffix, e.g., *arh-as-e* 'to be worthy', *cakṣ-as-e* 'to see', *jav-as-e* 'to speed', *jīv-as-e* 'to live', *bhoj-as-e* 'to enjoy', *rāj-as-e* 'to shine', *har-as-e* 'to seize'.
3. *i-e > ay-e*: Some half a dozen forms are available; e.g., *tuj-ay-e* 'to breed', *dr̥ṣ-ay-e* 'to see', *yudh-ay-e* 'to fight', *cit-ay-e* 'to understand'.
4. *ti-e > tay-e*: Four or five forms are available; e.g.; *pī-tay-e* 'to drink' *sā-tay-e* 'to win', *ū-tay-e* 'to help'.
5. *tu-e > tav-e*: Quite a number is formed with this suffix; e.g.; *at-tav-e* 'to eat', *e-tav-e* 'to go', *kar-tav-e* 'to make', *gan-tav-e* 'to go', *dā-tav-e* 'to give', *pak-tav-e* 'to cook', *man-tav-e* 'to think', *sar-tav-e* 'to flow', *han-tav-e* 'to slay'.
6. *tavā + e > tavāi*: Only a few forms are available; e.g., *ē-tavāi* 'to go', *gān-tavāi* 'to go', *dā-tavāi* 'to give', *sār-tavāi* 'to flow', *jīv-i-tavāi* 'to live'.
7. *tyā-e > -tyāi*; only one example, *i-tyāi* 'to go'.
8. *dhyā-e > dhyāi*: The *dhyāi* is probably related to the middle infinitive *-s-thai* in Greek. The *-s-* in Gk. might have come from a nominal *s-stem* and *thai* answers to OIA *dhe* as in *śrad-dhe* (dat. sg. of a noun in *-dh*, a weak form of IE **dhe*). The OIA *-dhyāi*, *-dhye* as in *dhiyā-dhyāi* (to deposit), *gamā-dhye* (to go) are extended forms from *-*dhe/*dh-*. Many examples of this form are available, e.g., *iyā-dhyāi* 'to go', *gama-dhyāi* 'to go', *gr̥ṇā-dhyāi* 'to practise', *piba-dhyāi* 'to drink', *pr̥ṇa-dhyāi* 'to fill', *mandaya-dhyāi* 'to rejoice'.
9. *man-e*: A few examples, *dā-man-e* 'to give', *dhār-man-e* 'to support', *vid-man-e* 'to know', *bhar-man-e* 'to preserve'.
10. *van-e*: Three forms are available, e.g., *dā-van-e* 'to give', *tur-vaṇ-e* 'to overcome', *dhūr-vaṇ-e* 'to injure'.

Ablative Infinitive

Though the ablative infinitive is not very common, there are some forms which signify ablative infinitive "from ..." = "to ...". It is formed in two ways—with *-as* and *-tos*.

The *-as* form has the real ablative sense; e.g., *ava-pád-as* in *trādhvam kartād ava-pad-as* (RV. II. 29.6) 'save us from the pit, falling down (into it)'. So also *sam-prc-as* 'coming in contact', *ā-trd-as* 'being pierced', *abhi-śriṣ-as* 'binding'.

The *-tos* form occurring in some six forms in the RV in the sense of ablative is sometimes confused with the genitive; e.g., *gān-tos* 'going', *jāni-tos* 'being born', *sò-tos* 'pressing', *hān-tos* 'being struck', *ni-dhā-tos* 'putting down', *é-tos* 'going'.

Genitive Infinitive

The genitive infinitive is, in fact, very rare. "Three infinitives in *-tos* have the genitive sense, viz. *kār-tos* 'doing' (with *madhyā*), *dā-tos* 'giving', and *yó-tos* 'warding off' (both with *īś* 'have power'). In two passages in which *īśe* governs the infinitive attraction of the object appears as with the dative infinitive: *īśe rāyāḥ suviryasya dātos* (VII. 4^o) 'he has power over wealth (and) brave sons, over giving (them)', i.e., 'he has power to give wealth and brave sons'; also *yāsya...īśe...yòtos* (VI. 18¹¹) 'whom he can ward off'." [VG. §587 ba].

Locative Infinitive

The locative infinitive is rare in the RV; some thirteen or fourteen forms are available. Sometimes it is difficult to distinguish the locative meaning from the infinitive one.

The locative infinitive is formed with *-i*, sometimes preceded by *-tar-* and *-san-* making *-tar-i* and *san-i*. For example—

- (i) with *i* only
drś-i and *saṃ-dṛś-i* 'on seeing', *saṃ-cákṣ-i* 'on beholding', *budh-i* 'at the waking'.
- (ii) with *-tar-i*
dhar-tār-i 'to support', *vi-dhar-tar-i* 'to bestow'.
- (iii) with *-san-i*
tar-i-śāṇ-i 'to cross', *ne-śāṇ-i* 'to lead', *par-śāṇ-i* 'to pass', *gr-ñi-śaṇ-i* 'to sing'.

2. Participles

Participles are verbal forms used as adjectives. Participles are derived from verb in many IE languages. They refer to participation in the action or state of the verb. As adjectives participles follow the noun and therefore are declined.

Participles are of two types : active and middle, and they are found in all the stem-systems (present, perfect, aorist and future). In perfect and aorist stem-systems the participles are different. The present and the future participles are practically the same except *-sy-* in the future. The suffixes are shown below :

The IE active participle of the thematic base is *ent* : *ont*, *nt* : *nt* of all grades ; e.g., OIA. *bharant*, Gk. *phéront-*, Lat. *ferent-*, Goth. *bairand-*, Lith. *vežant-*. The unthematic participle is *-ent*, *-nt* ; e.g., IE **s-ent*, *s-nt* > OIA. *sántam* (acc. sg.), *satás* (gen. sg.), *satī* (fem. nom. sg.), OIA. *krīn-ánt* (buying), *sunv-ánt* (pressing out).

The perfect active participle of IE was **yes* with ablaut grades- **yos*, **yōs*, **us* and **yet*, **yot*. The exact relationship between the two sets **yes* and **yet* is not known. The IE suffix **yes* (= **yās* nom. sg.) is presented in OIA, e.g., *vidvān* (nom. sg.), Av. *vidvā*, OIA. *vidvāṃsam* (acc. sg.), Av. *vidvāṅham*, OIA. *vidvas* (voc. sg.), *vidūsas* (gen. sg.) ; nom. sg. fem. *vidūsi*, Gk. *id-uia* (< **id-usi-a*). The **yet* form is found in OIA instrumental, dative, ablative dual and plural, e.g., *vidvādbhyām*, *vidvādbhis*, *vidvādbhyas*, but in Gk the IE **yet* (cf. Goth. *weid-wōþs*, 'witness') became generalized in the oblique cases. The OIA. *vat* (< IE **yet*) is a later origin.

The IE middle participles were in three grades of ablaut : **meno-*, **mono-*, and **mno-*. Of the three, the first IE **meno-* Gk. *meno* became generalized in Gk and partly also in Latin, the second IE **mono-* = OIA. *-māna* (for the thematic base, otherwise *āna*), Av. *mana*, *-mna* is found in OIA, e.g., *bhāra-mānah*, Gk. *pherōmenos*, OIA. *bōdhamānah*, Gk. *peuthōmenos*,

and the third IE **mno* generally occurs in Latin, e.g., *alumnus*, *autumnus*. In the Greek perfect-*ménos* (<IE **menós*, cf. OIA. *āná*) is the regular form, e.g., *gegramménos*.

In the aorist stem-system, the IE participle is the verbal adjective in *-tō-* which is reflected in OIA, Gk. and Lat. Originally this verbal adjective denoted completed action. In Gk. this *-tō-* is active, whereas in OIA and Latin the force is usually passive. The accent is on the suffix *-tō-* which shows that originally the stem had the weak grade of ablaut; e.g., OIA. *sthitás*, Gk. *statós*, Lat. *status*, OIA. *śrutás*, Gk. *klutós*, Lat. *in-clutus*, OIA. *dat-tás*, Gk. *dotós*, Lat. *datus*, OIA. *diśtás*, Lat. *dictus*, OIA. *juśtás*, Gk. *geustós*.

The verbal adjective in *-tavant* > *tavān* (cf. Gk. *téos*) has no parallel in the other languages. It is a special OIA formation (*ta + vant*); e.g., *kṛtāvān* 'having done', OIA. *dat-tavān* 'having given', (cf. Gk. *dotéos*). Though this type of formation is found in the RV, it is never used in the participial sense. Except in one or two examples (*aśitāvaty átithāu*, AV.) 'one's guest having eaten', this is hardly met with even in the Brāhmaṇas. This is, in fact, quite common in the later language.

Future passive participles/Potential participles

The future passive participles are *tavya*, *anīya*, (*ṇ*)*ya(t)*, *ya(t)*, (*k*)*ya(p)*. The *-ya-* type is the general suffix in the RV and AV. Only two or three instances of *tavya* and *anīya* are found in the AV; otherwise these latter two are more frequent in the classical period than in the earlier stage. For example,

1. *y* : *ityā* (to be gone), *kṛtya* (to be made), *havya* (to be invoked),
2. *y* > *eya* : *dēya* (to be given), *mēya* (to be measured).
3. *āy-ya* : *pañāyya* (to be admired), *śravāyya* (glorious).
4. *enya* : *car-ēnya* (to be acted), *dṛś-ēnya* (to be seen).
5. *tavya* : *jan-i-tavya* (to be born), *himsitavya* (to be injured, AV. V. 18.6).
6. *anīya* : *āmantraṇīya* (fit for address, AV. VIII. 10.7).

3. Gerunds

Originally the gerunds are case-forms of a verbal noun, and like the infinitive the case-endings are added to it. Each stem-system has a distinct type of gerunds which can take an object in the accusative. The gerundial suffixes as found in the RV and AV are *tvā*, *tvāya*, *tvi*, *tyā*, *yā*. The *-am* is a later origin. They are arranged into case-forms as follows :

Accusative	<i>parikramam</i>	'going around'	cf. OIA. (ṇ) <i>am</i> (ul)	Present-stem (Repetitive)
Instrumental	<i>pitvā</i>	'drinking'	cf. OIA. <i>tvā</i>	Aorist-stem (Past)
Dative	<i>kṛtvāya</i>	'making'	cf. OIA. <i>tvā + ya</i> (Pā. <i>ktvor yak</i> ||	
Locative (?)	<i>kṛtvī</i>	'in making'		
Indefinite uninflected	<i>parikramya</i> <i>āga-tyā</i>	'striding about' 'having come'	cf. OIA (l) <i>ya</i> (p) <i>-tyā</i>	Perfect-stem

CHAPTER ELEVEN

Indeclinables

I. Adverb

The origin of adverb is twofold. The majority of adverbs are isolated case-forms of nouns, pronouns, and adjectives. The other class of adverbs is formed by suffixes. In most of the cases, the origin cannot be traced from IE.

1. Case-forms

All the cases, except the vocative, can be used adverbially.

1. The nominative occurs in OIA *pārah*, 'far off', Lat. *prorsus*, cf. Gk. *allaks*, *halis* etc.
2. The accusative is also used adverbially, e.g., OIA. *kāmam* 'at pleasure', cf. Gk. *prōton* 'at first', OIA. *kim* 'why', Lat. *partim*, OIA. *puru*, Gk. *polú*, Goth. *files*, OIA. *hyah*, Gk. *khthēs*, OIA. *nāma* 'by name', Gk. *mega*, OIA. *naktam*, Gk. *nuktōs*, Goth. *nahts*, OE. *nihtes*,
3. Some crystalized instrumental endings are found, e.g., *cireṇa*,
4. Some dative forms are also found, though rare, e.g. *cirāya*,
5. Some ablative forms are *cirāt*, OIA. *tāt* (<IE **tōd*, abl. ending), OIA. *kasmat*, 'why,' *yāt* 'in so far'. The old Lat. forms *meritōd*, *rectēd* are remnants of abl. case-form IE **ōd*/**ēd*.
6. The genitive forms occur in OIA. *cirasya*,
7. The locative adverbs are OIA. *ḍure* 'at a distance', *āke*, near at hand'.

2. Suffixes

Some of the IE suffixes have survived in the formation of adverbs ; e.g.,

1. IE **dhi* > OIA. *dhi*, Gk. *thi*, cf. Lat. *bi*
OIA. *a-dhi* (above), cf. Gk. *pó-thi*, *tó-thi*, cf. Lat. *ubi*, *ibi*.

2. IE **dha* > OIA. *dha*, *ha*, Gk. *tha*.
OIA. *idha*, (vedic and Śauraseni-pkt), Cl. *i-ha* (here), *ku-ha* (where). cf. Gk. *en-tha*, *pros-tha*
3. IE **dē*/**dō* > OIA. *dā*, Gk. *dē*, Lat. *dē*, OChSl. *do*, OE *tō*.
OIA. *ka-dā*, *ya-dā*, *ta-dā*, Gk. *oika-de* (at home),
4. IE **tos* > OIA. *tas*, Gk. *tos*, Lat. *tus*.
OIA. *tataḥ*, *i-taḥ*, Gk. *entos*, *ek-tos*, Lat. *in-tus*, *fundi-tus*.
5. IE **kps* > OIA. *śas*, Gk. *kas*.
OIA. *devā-śaḥ* 'god for god', Gk. *andra-kās*

II. Prepositions

Prepositions are of two types. The first can be used adverbially, they can be compounded with the verbs. The other class is used adnominally, they are not compounded with any verbs, but govern cases only.

The first class of prepositions, called adverbial prepositions, are given below :

- IE **ē* > OIA. *ā*, Av. *ā*, Gk. *ē* (in *ē-dē*), Lat. *ā* (<*a pueris*, 'from boyhood')
- IE **pro* > OIA. *pra*, Av. *fra*, *frā*, OP. *fra*, Gk. *pro*, Lat. *pro*, *prō*.
- IE **parā* > OIA. *parā*, Av. *para*, *parā*, OP. *parā*, Gk. *para*,
Lat. *per*. Ger. *ver*, Eng. *for*.
- IE **mbhi* > OIA. *abhi*, Av. *aivi*, *aibi* (Gāthā), OP. *abiy*,
Gk. *ambhi*, Lat. *ambi*, Ger. *um*.
- IE **proti* > OIA. *prati*, Av. *paitī*, *paiti*, Gk. *proti*, Lat. *por*.
- IE **peri* > OIA. *pari*, Av. *pairi*, *pairī*, Gk. *peri*.
- IE **eti* > OIA. *ati*, Av. *aiti*, OP. *atīy*, *aḥiy*, Gk. *eti*, Lat. *et*.
- IE **su* > OIA. *su*, Av. *hu*, Gk. *eu*.
- IE **nis* > OIA. *nir*, Av. *niž*, *niš*,
- IE **dus* > OIA. *dur*, Av. *duž*, *duš*, Gk. *dus*.
- IE **ni* > OIA. *ni*, Av. *nī*, Gk. *eni*, Eng. *ne*.
- IE **eva* > OIA. *ava*, Av. *avā*,
- IE **ud* > OIA. *ud*,
- IE **sm* > OIA. *sam*, Av. *ham*, Gk. *sum*.

IE *ui* > OIA. *vi*, Av. *vi*, *vī*,

IE **an-* > OIA. *anu*, Av. *anu*, OP. *anuv-*, cf. Gk. *an(a)*

IE **epi* > OIA. *api*, Av. *aiṇi*, *aiṇi*, Gk. *epi*, Lat. *ab*.

IE **edhi* > OIA. *adhi*, OP. *adiy*.

IE **upo* > OIA. *upa*, Av. *upa*, *upā*. Gk. *hupo*, Lat. *sub*, Goth. *uf*.

The second class prepositions, called adnominal prepositions, are many. Some of them are mentioned below :

adhas (below), *antarā* (between), *abhitas* (around), *upari* (above), *ṛte* (without), *purastād* (in front of), *sacā* (with), Av. *hacā*, *sākam* (with), etc.

III. Conjunctions

OIA conjunctions can be arranged under five heads :

1. Copulative/Cumulative :

OIA. *ca*, Gk. *te*, *uta* (and), *api*, *tathā*, *tataḥ*, *kim ca*, *ced* (*ca* + *id*), 'if'.

2. Adversative :

tu (but), *ū* (now, again).

3. Disjunctive :

vā (or), *atha vā*, cf. Gk. *ē* (or), *ē...ē* (either...or).

4. Illative/Inferential :

hi (for), *nū* (now), Gk. *nūn*, cf. Gk. *āra* (then), *ōun*

5. Causal :

hi (for, because), *hina*, cf. Gk. *gar* (for).

IV. Interjections

In the Saṃhitās some words in the sense of interjections occur. They are mainly of two types, exclamatory and onomatopoeic [VG. § 659].

The exclamatory words are—

baṭ (truly), *baṭa* (alas !), *hanta*, *haye* (come !), *hiruk*, *huruk* (away).

The onomatopoeic interjections are—

kiklā (making a tattering sound), *kikṇi*, *ciṣcā* (whiz !), *phaṭ* (crash !), *phal* (splash !), *bā* (dash !), *bhuk* (bang !), *śal* (clap !).

Select Bibliography

This bibliography is extremely selective rather than exhaustive. This has been prepared for those readers who want to widen their knowledge of the subject. I have mainly included only those books or articles which have a good contribution to the knowledge of the subject. It is arranged chronologically as far as possible in order to exhibit the growth of the subject. It is classified primarily language-wise and sometimes also topic-wise when somebody has contributed to a particular topic only. It is needless to say that I culled out this bibliography when I was in England, and naturally many of them could not be verified at the present moment.

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Appendix I

SANSKRIT AND GREEK COMPOUNDS

Preamble :

Linguistically¹ or grammatically, *samāsa* (compound), one of the most important formative elements of words, belongs to the domain of morphology. It is to be remembered that *samāsa* is one of the ways by which a word is formed with another word(s) which are supposed to be syntactically connected. In a *samāsa* the basic factor is that the compounded words are syntactically related. The other formative elements of words are the primary (*kṛt*) and the secondary (*taddhita*) suffixes. The following table will give us the idea of the domain of morphology and the position of *samāsa* therein.

MORPHOLOGY

1. Formative elements	2. Parts of Speech	3. Grammatical Categories
1. Formation of words by a) primary (<i>kṛt</i>) suffixes b) secondary (<i>taddhita</i>) suffixes i) feminine suffixes	1. Noun 2. Adjective	1. Number, 2. Gender, 3. Case, 4. Case-endings including syncretism, 5. Declension. 1. Comparison plus others as in noun, 2. Numerals.
2. By <i>Samāsa</i> i) <i>Samāsānta</i> suffixes	3. Pronoun 4. Verb	1. Deictic plus others as in noun A. <i>Primary Conjugation</i> 1. <i>Finite</i> : 1. Root, 2. Person, 3. Number, 4. Voice, 5. Mood, 6. Tense, 7. Augment, 8. Reduplication, 9. Aspect (<i>vikarāṇa</i>), 10. Stem-system, 11. Personal Terminations, 12. Conjugation.
3. Parts of a word : a) base b) inflection (<i>sup/tiṅ</i>)	Indeclinables 5. Adverb 6. Preposition 7. Conjunction 8. Interjection	11. <i>Non-finite</i> : 13. Infinitive, 14. Participle 15. Gerund. B. <i>Secondary Conjugation</i> : 1. Passive, 2. Causative, 3. Denominative, 4. Desiderative, 5. Frequentative/Intensive
4. by various other ways : a) Analogy b) Metanalysis c) Popular/Folk etymology d) Portmanteau words or blends e) Contamination f) Clipped words g) Vulgarism h) Spoonerism		

1. A portion of this article was originally published by the University of Mysore in 1993. But the present dissertation is

The Indian grammarians have given special attention to the formation of words by means of *samāsa*. As far as I know, Pāṇini (4th cent. B.C.) is the first grammarian who has discussed *samāsa* elaborately. The later Sanskrit grammarians have followed him. The Indian philosophers, Naiyāyikas and Mīmāṃsakas in particular, have laid the foundation on the meaning of *samāsa* (compounded words) as against non-compounded words. Later on, lots of small treatises were also composed only on *samāsa*. On the contrary, the first Greek grammarian Dionysius Thrax (2nd cent. B.C.) in his book *Hē Grammatikē Tekhnē*, divided in 25 sections, has not discussed *samāsa* at all, though in his sections XII *peri Aekheōs* (on words, *leksis*) and XIII *peri logoi* (on sentences) he has mentioned the meaning of some words where the compounded forms are also available. So also Marcus Terentius Varro (bet. 116/17-27 B.C.), the first Latin grammarian, who in his book *De Lingua Latina*, which originally consisted of twenty-five books in three parts, such as, (i) etymology of Latin words (1-7 books), (ii) their inflexions and other changes (8-13 books) and (iii) syntax (14-15 books), has not also discussed anything on *samāsa*. It is only after the discovery of Sanskrit that the European scholars have devoted a chapter on compound in their respective treatises. Moreso, even some of the Sanskrit terms, such as, *dvigu*, *karmadhāraya*, *Bahuvrihi* and many more are incorporated in their books side by side with their English equivalents. These English terms are neither Greek nor Latin in their origin. Though the English word compound has come from Latin *componere* (*com-*, together and *ponere*, to put) meaning 'to arrange or put together' which became in old French *compondre* > MF. *compon-* > ME. *compouinen* > Mod. E. *compound* (a *pt. pp.* form) original meaning being 'to mix or unite (various ingredients) in one mass or body', and from there in grammar it is used in the sense of 'putting two or more words into one', in reality compound has no place in English grammar. But this does not mean that the English language is devoid of compound. For example, a *blackbird* is always distinguished from a *black bird* (cf. Sanskrit

completely recast and rewritten with copious examples from Greek and Latin not incorporated in my previous book on *Samāsa*.

kṛṣṇasarpa, 'a cobra', and *kṛṣṇaḥ sarpah* 'a black snake'). So also in English, 'forget-me-not flowers' 'do-it-yourself-machine' and so on. However, as the concept of *samāsa* is not available in Greek and Latin authors, I will have to depend on the material found on Indian soil. But at the same time I will try to show how the Indian concept is equally applicable to Greek and Latin.

According to Indian authors, the mere congregation of words into one form will not make any *samāsa*; there must be some amount of syntactical connection (*sāmarthyā*) between the compounding words. If the words are not syntactically related to each other, they cannot form a *samāsa*. This is the most important thing of forming a word by means of *samāsa*. Hence the dictum of Pāṇini is *samarthaḥ padavidhiḥ* (II. 1.1).

The general meaning of this *sūtra* is "a rule which relates to inflected words (i.e. *padas*) is to be understood to apply to those *padas* the senses of which are syntactically connected."

The *padavidhi* (= *padānām vidhiḥ*) means "a rule relating to *padas* ('inflected words'). The *vidhi* means (*vidhīyate iti vidhiḥ vi-dhā + ki*) 'that which is ordained', i.e. a 'rule' (*vidhi*). Therefore, the rules that are ordained with regard to *padas* are *padavidhi*.

In the commentaries of Pāṇini, the *padavidhis* are explained as of three types : *samāsa-vidhi*, *vibhakti-vidhi* and *parāṅgavad-bhāva-vidhi*.

Samāsa-vidhi means 'rules relating to compounding of words (*samāsa*)'. *Vibhakti-vidhi* means 'rules relating to *vibhakti* or the application of declensional and conjugational suffixes; whereas *parāṅgavad-bhāva-vidhi* means 'the rule by which one word is considered as if it has become a constituent member of another word.'

The word *samartha* in the above aphorism means 'capable' i.e. 'syntactically related'. It means that when a word is capable of explaining the sense of a sentence on analysis is called *samartha*. This idea of *samartha* can be explained in two ways : *vyapekṣā* and *ekārthibhāva*.

Vyapekṣā-sāmarthya means "words depend upon the words of a sentence as connected in sense"; e.g., *rājñāḥ puruṣaḥ* ('king's man') where the inflected words are related to each other in sense. On the contrary, *ekārthibhāva sāmarthya* means "a single word is capable of expressing the sense of a sentence on analysis", e.g. *rājapuruṣaḥ* ('a king's man'), i.e., a single compounded word is an *ekārthibhāva sāmarthya*. In the case of *vyapekṣā*, the inflected words *rājñāḥ puruṣo'svaḥ* ('king's man and horse') are possible; but in the *ekārthibhāva* this addition of word after *rājñāḥ puruṣaḥ* is not possible.

Here a question may be raised, if *samāsa* is possible only with words which are syntactically related, then how the sentences like *devadattasya guruputraḥ* ('the son of the preceptor of Devadatta'), *devadattasya dāsabhāryā* ('the wife of the slave of Devadatta'), *kim odanaḥ śālinām* ('is this rice of sāli-grains?') etc. are to be explained.

All these above mentioned usages are to be considered correct, because they convey the sense that is desired to be conveyed by a sentence (*sāpekṣatve 'pi gamakatvāt samāsaḥ*). It is a kind of loose compound where the related words are detached from the main compounded words. Patañjali (2nd cent. B.C.) has also said—'where the sense is understood, there will be a *samāsa*, e.g. the family of Devadatta's preceptor (*yatra gamako bhavati, bhavati tatra vṛttiḥ, tad yathā Devadattasya gurukulam*—*Mahābhāṣya* under Pā. II. 1.1)

In this particular case, the modern idea of compound may be compared. C.D. Buck has also expressed almost similar idea in connection with English composition. He says—"Mere semantic unification of a group of words may constitute a sort of psychological composition, but not necessarily linguistic composition in any reasonable use of the term. Thus in current English idiom *house of ill fame* is as much a unit in sense as its equivalent *brothel*, but common sense rebels against calling it a compound. Yet this would be the logical result of the extension which some scholars give to the notion of composition." (*Comparative Grammar of Greek and Latin*, Chicago, sixth impression, 1955, p. 353).

The next point which is related to *samāsa* is the question of its meaning attached to the compounded words. The Indian grammarians (as well as the logicians) think that in a compound word (*samāsa*) an 'additional sense is attached to the word'. Whether a *samāsa* has got an 'additional sense' or not can be tested by using an adjectival word before the compound; e.g., *nirdhanaḥ rājapurusaḥ* 'a penniless king's man'. In this sentence penniless is attributed to whom. Who is penniless? The king or king's man? This additional meaning is subtle, but still it exists. It is in this connection that the technical term *ṽrtti* is used to indicate that additional sense', and that is why, *samāsa* is regarded as one of the *ṽrttis*. Patañjali in his *Mahābhāṣya* (under Pā. II. 1.1) has defined *ṽrtti* as *parārthābhīdhānaṃ ṽrttiḥ* which means "the power of expressing a sense which is different from what was originally inherent in the word". The purpose of this definition is to indicate that 'when a word undergoes a *ṽrtti*, it acquires an additional sense. For example, when we say *rājñah purusaḥ*, it refers to the meaning which it contains in the word, but when we say *rājapurusaḥ* it gives an additional meaning 'the man of the king', i.e., not any man from the royal family, but a particular one having affiliated with king. Here in this compound *rājapurusaḥ*, the word *rājan* does not really mean 'the king', because if we place any adjective before it, such as, *nirdhanaḥ rājapurusaḥ*, the poverty does not refer to the king, but to the man (*purusaḥ*). So in a compounded word an extra meaning is attributed to the word. It should be noted that 'this additional sense' always refers to something other than the original connotation of the word.

The purpose of Samāsa

samāsa has, at least, three purposes or utility—*aikapadyam aikasvaryam eka-vibhaktikatvaṃ ca samāsa-prayojanam*. The basic idea of *samāsa* is an abridgement of the expanded words (*samāsānāṃ samāsaḥ saṃkṣepa iti yāvat*). The advantage of *samāsa* is to make a lengthy sentence into a single complete form (*ekapadibhāva*). In a sense lots of sentences can be reduced into a single word by means of *samāsa*.

The *samāsa* brings the word into a single system of accent (*aikasvāryam*). This uniformity of accent is due to the easiness of pronunciation of a compound word.

The *samāsa* also brings the series of words into a single case-termination; e.g., *rājñāḥ puruṣaḥ* is *rājapuruṣaḥ* where the sixth case-termination in *rājan* is lost in *rājapuruṣaḥ* and renders the whole word into a single case-ending. In this particular case Greek and Latin have some differences. In Greek the vowel *o* and in Latin the vowel *i* are inserted; e.g. Gk. *diko-graphos* 'writer of law-speeches'; Lat. *caeli-cola* (*caeli-cola* or *caelo-cola*) 'dwelling in heaven'. So also in English, *hand-craft* is *handicraft*.

Classification of Samāsa

Samāsa can be classified from different points of view. But following the tradition of Pāṇini, *samāsa* is classified in the following manner :

Main Samāsas	Sub-varieties
1. <i>Avyayibhāva</i> (Indeclinable)	1. <i>nitya</i> : a) <i>asvapada-vigraha</i> 2. <i>anitya</i> b) <i>avigraha</i>
2. <i>Tatpuruṣa</i> (Determinative)	1. <i>tatpuruṣa</i> proper (1-7th). 2. <i>upapada</i> 3. <i>prādi</i> , 4. <i>gati</i> 5. <i>nañ-tat</i> , 6. <i>ekadeśivat</i> , 7. <i>karmadhāraya</i> , 8. <i>madhyapadalopī</i> , 9. <i>mayūravyaṃsaka</i> , 10. <i>upamāna</i> , 11. <i>upamita</i> 12. <i>rūpaka</i> , 13. <i>dvigu</i> .
3. <i>Bahuvrithi</i> (Attributive)	1. <i>samānādhikaraṇa</i> , 2. <i>vyadhikaraṇa</i> , 3. <i>vyatihāra</i> , 4. <i>madhyapadalopī</i>
4. <i>Dvandva</i> (Copulative)	1. <i>samāhāra</i> , 2. <i>itaretara</i>

This is, in general, the different types of *samāsa*. But sometimes the classification is made on the following outlook. *Sāmsa* is

(i) *luk* or *aluk*, (ii) *nitya* and *anitya*, (iii) *nitya*, *anitya* and *vikalpa*, (iv) *avyayībhāva*, *tatpuruṣa*, *bahuvrīhi* and *dvandva*. (v) Sometimes the position of a word and its meaning are emphasized, such as, *pūrvapadārtha-pradhāna*, *uttara-padārtha-pradhāna*, *anyapadārtha-pradhāna*, *sarva-padārtha-pradhāna*, *madhya-padārtha-pradhāna* and *antya-padārtha-pradhāna*. (vi) Sometimes *samāsa* is classified as of six kinds : *dvigu*, *dvandva*, *avyayībhāva*, *karmadhāraya*, *bahuvrīhi* and *tatpuruṣa*. (vii) Sometimes *samāsa* is considered as of seven types : in addition to the above six, *nitya* is added to it; (viii) later classification of *samāsa* is of 28 types : 8 types of *tatpuruṣa*, 6 types of *karmadhāraya*, 6 types of *bahuvrīhi*, 2 types of *dvigu*, 4 types of *dvandva*, 2 types of *avyayībhāva*.

Description of the Compounds :

1. *Avyayībhāva* = Adverbial or Indeclinable.

In the *avyayībhāva* (adverbial or indeclinable) compounds the first member must be either a preposition (= *upasarga*) or an adverbial prefix, and the last member will take the form of a neuter accusative case e.g., *yathāśakti* 'according to one's strength', *pratidiśam* 'in every quarter'.

The adverbial prefix with which these compounds are formed is *sa*, a contracted form from *saha* e.g., *sakopam* 'with anger', *sādaram* 'with respect', *sāgni* 'with fire' etc.

This sort of indeclinable compounds is also found in Greek and Latin. For example, Gk. *sun-doulos* 'fellow slave', *hup-arkhos* 'under officer', *epi-khalos* 'covered with bronze', *en-theos*, 'having god within', *anti-bion* 'opposing force to force', *para-khrēma* 'on the spot', 'straightway', *hyper-moron* 'beyond fate', etc. The Latin examples are *admodum* 'up to the measure', *affatim* (<*adfati*m) 'enough', *obvium* 'on the way', *per-facilis* 'very easy', *vē-cors* 'without sense', 'senseless'.

The difference between Greek-Latin adverbial compounds with Sanskrit is this that in Sanskrit the word ends with neuter accusative case, whereas in Greek-Latin the original gender is retained.

The sub-varities of adverbial compound are not discussed here.

2. Tatpuruṣa = Determinative.

When a compound consists of two members and the first part *determines* or modifies the second part, that is called *Tatpuruṣa*. *Tatpuruṣa* literally means *tasya puruṣaḥ* 'his person'. In the determinative compound, the first part would be of different case from the second. That is to say, the first or the second part stands in the sense of an oblique case to the other part. Both Sanskrit and Greek are analogous to this principle. For example,

Accusative : Skt. *svargaprāptaḥ* 'one who has obtained heaven (*svargaṃ prāptaḥ*), Gk. *logo-gráphos*, speech writer (*lógos graphōn*, 'one who writes speech').

Instrumental : *lobha-mohita* (= *lobhena mohitaḥ*) 'beguiled by avarice', *rāja-pūjitaḥ* (*rājñāḥ pūjitaḥ*) 'honoured by king'; Gk. *kheiro-poiētos* (*khersei poiētos*) 'made by hand', *khrusodetos* (*khrusoi detos*) 'bound with gold'. These can be compared with English *thunder-struck*, *star-sown*, *storm-swept* etc.

Dative : Skt. *pādodakam* 'water for the feet', *yūpadāru* 'wood for sacrifice', *śaraṇāgataḥ* (*śaraṇāya āgataḥ*) 'come for protection'. So also in Greek *iso-theos* (= *isos theōi*) 'godlike'. Similar types of examples are also found in English; e.g., *blood-thirsty*, *church-goer*.

Ablative : Skt. *rājya-bhraṣṭaḥ* (= *rājyād bhraṣṭaḥ*) 'fallen from the kingdom', *bhavad-bhayam* 'fear of you', *bhavad-anyaḥ* 'other than you'. So also in Gk. *anemo-skepēs* 'sheltering from the wind'; this can be compared with English *land-breeze*, *sea-breeze*.

Genitive : Skt. *samudra-tīram* (*samudrasya tīram*) 'sea-shore', *arthāgamah* 'acquisition of wealth'. Gk. *strato-pedon* (*stratou pedon*) lit. 'ground on which an army is encamped' i.e., 'camp', *aksio-logos* 'worthy of mention'. Compare English *ringmaster*, *law-officer*, *jestbook* etc.

Locative : Skt. *pañka-magnaḥ* (= *pañke magnaḥ*) 'sunk in the mud'. Gk. *oiko-genes* (*en oikōi genomenous*) 'born in the

house'; so also *hodoi-poros* 'way farer'. Compare English *heart-sick*.

The pattern of determinative compounds is also available in Latin e.g. *auri-eula* 'the lobe of the ear', *auri fodina* 'a gold-mine', *manupretium* 'earned by hand', i.e. 'wages', *matricidium* (cf. English *matricide*) 'the slaying of a mother by her son', *parri-cida* (for *patri-cida*) 'one who murders a parent'.

The English language furnishes innumerable examples of *tatpuruṣa* compound; e.g. *moth-eater*, *door-mat*, *writing-pad*, *writing-master*, *snow-drift*, *ink-pot*, *ink-stand*, *piest-ridden* and so on.

It should be noted in this connection that the case relation as existing in these above mentioned compounds is purely logical and necessary for eliciting the sense involved in these compounded words.

3. *Karmadhāraya* = Descriptive.

Pāṇini includes *karmadhāraya* as a sub-class of *Tatpuruṣa*. So in the *karmadhāraya* both the members are in the same case relation, i.e. they have the same case when dissolved. In the case of the *tatpuruṣa* the attributive member has one of the oblique cases when dissolved into different parts, whereas in *karmadhāraya* both the members are in the same case when dissolved. So in the Descriptive compound the first member may be an adjective, participle or a noun. For example, *sādhu-janaḥ* (= *sādhuh-janaḥ*) 'a good man', *puṇya-karma* 'a holy act', *saṃskṛtoktiḥ* 'polished speech' etc. So also in Greek, *megalo-mētēr* 'grand-mother', *megalo-noin* 'great thought', *iso-podon* 'a level ground' 'a flat', *hemi-kuon* 'half-dog'. In Latin we have *decemviri* 'a board of ten men', *meri-dies* (for *medi-dies*) 'midday', *sacri-portus* 'a sacrificing haven', *semi-deus*, 'half-divine' etc. Parallel compounds are also found in English, e.g., *holiday*, *good-sense*, *good-will*, *black-guard*, *ill-nature* etc.

4. *Bahuvrīhi* = Attributive.

The *Bahuvrīhi* compounds are generally the epithets of other nouns. In this compound the first part defines the second, but the whole compound is an adjective expressing

a quality. In this kind of compound the idea of having (Gk. *ekhōn*) is to be understood, e.g., *prāptodako grāmaḥ* (= *prāptam udakaṃ yaṃ grāmam*) 'a village to which the water has come'. This *bahuvrīhi* compound is abundantly found in Sanskrit. In Greek also we have lots of examples of *bahuvrīhi* compound. e.g. *argurotoksos* 'having a silver bow', *makro-kheir* 'having long arms', *theo-eides* 'having the appearance (*eidos*) of a god', i.e. godlike, *tethrippos* 'having four horses' and so on. In Latin the examples are *bi-pēs* 'two-footed' *magn-animus* 'having great soul' i.e. 'great-souled', *ūn-oculus* 'one-eyed'.

5. *Dvandva* = Copulative

Copulative compounds are formed by two or more nouns or adjectives. The compounded forms are either singular or dual or plural depending on the members of the compounded words; e.g. *mṛga-kākau* 'a deer and a crow', *bhāryā-patī* 'wife and husband', *sukha-duḥkhe* 'pleasure and pain' etc.

In Greek and Latin also we have examples of copulative compounds, e.g., in Greek, *batrakho-nuo-makhia* 'frog-mouse war', *zōo-phuton* 'animal and plant'. *Zoophyte* is, therefore, a kind of *Dvandva* compound. In Latin, we have *su-ovi-taurilia* 'pig-sheep-bull sacrifice', a *Dvandva* compound. The English forms like *plano-convex*, *convexo-concave* are examples of copulative compounds.

Differences between Vedic and Classical Compounds

The above mentioned four or five compounds are, in general, the common nature of compound in both Vedic and classical Sanskrit. The Vedic compounds, resembling the Homeric compounds, have preserved more Indo-European features than the classical Sanskrit. The systems of gender-regulation, inflexions and *sandhi* are more or less the same in both the languages, though in Vedic some irregularities of the above are often available. But in structure there are some differences between the two. Some of the major points of differences are noted below :

1. In classical Sanskrit the compounds can be made of several words, but in Vedic generally two or three (but not many) words are compounded into one. In fact, in the RV

and the AV compounds of more than three words are not generally available. The compounds like *pūrva-kāma-kṛtvān* fulfilling former wishes are very rare.

2. Accent plays a prominent part in the Vedic compound, e.g., *mitrā-vāruṇā*, go-ghná, cow slaying, *satyām-ugrah*, truly mighty, *indra-śatru*, having Indra as a foe, and so on; but in Cl. Sanskrit, there is no accent of *samāsa*.

3. In Vedic compound *tmesis* occurs, e.g., *dyāvā cid asmāi pṛthivī namete* (RV. II. 12, 13), *dyāvā ha kṣāmā*, heaven and earth, but it is not possible in Cl. Sanskrit.

4. The iterative compounds are very frequent in Vedic e.g., *dyāvi-dyavi*, every day, *dāme-dame*, in every house, *māsi-māsi*, month after month; but no such compound is found in Cl. Sanskrit. Iteratives are treated as compounds in the *Samhitās*, because they bear only one accent with a special meaning.

"The only example of a verbal form occurring as an iterative is *pība-piba* drink, drink. In the ŚB also occurs *yājasva-yajasva*" (Macdonell, *Vedic Grammar*, p. 282).

5. The RV is replete with the *devatā-dvandva* compounds. It comprises the names of deities in which each member is dual in form and has a separate accent, e.g., *mitrā-vāruṇā*, *mātārā-pitārā*, *dyāvā-pṛthivī*; but in Cl. Sanskrit this has a parallel (Pā. *devatādvandve ca*, without any accent, e.g., *indrā-varuṇāu*, *mitrā-varuṇāu* *sūryā-candramasāu*, *agnīṣomāu* and so on. The *ā* at the end of the first member is, in fact, the dual sign of the Vedic *devatā-dvandva* compounds perpetuated also into Cl. Sanskrit.

6. "The old dual *dvandvas* are frequently represented by elliptical duals which put one of a pair in the dual to express both, as *dyāvā* = heaven and earth; *mitrā* = Mitra and Varuṇa; *pitārā* = father and mother; *mātārā* = mother and father, parents (Macdonell, *Vedic grammar*, p. 270).

7. The *Karmadhāraya* (Determinative) compound is rarer in the *Samhitās* than in the Cl. Sanskrit; e.g., in Vedic *puruṣa-vyāghrā* (VS) means *man-tiger*, but *puruṣa-vyāghra* in classical means *a man like a tiger*.

8. The Vedic *bahuvrīhi* compound is made with two words, e.g., *an-udra* (Gk. *ân-udro-s*), *waterless*, *rājā-putra* having kings as sons; but the *bahuvrīhi* in Cl. Sanskrit can

be made with three or more words, e.g., *citrā-jarati-guḥ* or *jarati-citra-guḥ*, one who has an old, brindled cow.

9. The verbal compounds with prepositions and adverbs are recognised in Vedic, e.g., *paryabhūṣat*, surpassed. As *pari* is unaccented, *paryabhūṣat* is regarded as one word.

10. One of the peculiarities of the Vedic compound is the use of *avagraha* (|) in the *Padapāṭha* in all sorts of compounds. The use of *avagraha* shows that the word is treated as one, e.g., *pra | jā*, *upa | sthe* etc. In a *dvandva* compound the *avagraha* is used, e.g., *śunaḥ | śepham*. It is to be noted that *iva* is always considered as compounded with the preceding word and an *avagraha* is inserted between them, e.g., *pitā | iva*, *vijah | iva*, *aśvasya | iva* and so on. The iterative compounds are separated by *avagraha*, e.g., *divē | dive* (I. 1.3).

In conclusion it can be said that compound (= *samāsa*) is a vital part of a language, and Greek and Latin and also English, are no exceptions to that. And in this respect, both Greek and Latin are analogous to Sanskrit. The present essay is just an example for the fuller study of the subject.*

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Appendix II

SOLECISM IN SANSKRIT LITERATURE : A LINGUISTIC STUDY

1. What is Solecism ?

SOLECISM (<Gk. *soloikismas* from the verb *soloikizein*, 'to speak or write badly or incorrectly or ungrammatically like the inhabitants of Soloi, Gk *soloikos*, 'ungrammatical form' > Lat. *soloecismus*, F. *solecisma*, Spanish and Italian *solecismo*) is the incorrect use of words by violating the accepted rules of grammar or syntax. The word is said to have come from the corruption of the Attic dialect among the Athenian colonists at Soloi in Cicilia. Although the term was originally used by the Greeks to describe the language of the people of Soloi, a city in ancient Cicilia, colonized by the Greeks, who used to speak a corrupt or an ungrammatical form of Attic Greek, the term is now extended to mean any ungrammatical form of the words in a sentence of any language whatsoever. Originally, though it refers to the speaking form of a language, gradually, in course of time, any kind of grammatical or idiomatic error or blunder, howsoever minor it may be, or any kind of vulgar or provincial use of words in speaking or writing, is regarded as *solecism*. So it is a kind of violation of grammatical rules in pronunciation, in grammar and lexis of a particular language, in the use of a phrase and word, in syntax. Hence to commit solecism means 'incorrectness in the use of language', 'a deviation from the proper, normal, or accepted order'.

2. Solecism in Sanskrit :

I have used the term *solecism* in regard to the un-Pāṇinian forms or the so-called ungrammatical usages of Sanskrit as found in the writings of post-Pāṇinian authors.

These forms are called un-Pāṇinian, because they cannot be justified by the prescriptions of Pāṇini. But if we take a historical outlook of Pāṇini's grammar including the Vārtikas of Kātyāyana and the exposition of Patañjali, we can say that though some of the forms or usages are not justified by Pāṇini, they can be done so by following the opinions of the other two grammarians. So there is a sort of acceptance of some irregular or ungrammatical forms in the historical development of Old Indo-Aryan, and this process of acceptance of some ungrammatical forms even by the later Sanskrit grammarians, such as, Śarvavarmā, Kramadiśvara, Vopadeva, and others, has been going on in the formation of Old Indo-Aryan. What we fail to understand is that if a form is not justified by Pāṇini, it does not mean that it is not accepted by others. There has always been a tendency, may be out of reverence to poets and dramatists, to justify the forms which apparently seem to be un-Pāṇinian. As a result, it is very often found that some of the commentators have twisted the sūtras of Pāṇini to justify the formation of the word. But those who are strong votaries of Pāṇini's grammar have sometimes rejected the un-Pāṇinian forms.

The grammar of Pāṇini is to be studied along with Kātyāyana and Patañjali. Apart from the fact that they constitute a 'triad' (*trimuni-vyākaraṇam*), the study of their views put together will help us to understand the development of the Sanskrit language, at least, as recorded by all these authors. The fact which we often forget to recognize is that these three grammarians come from three different regions of India, Pāṇini from Sālātura in Taxila in the North-West Frontier Province (Gāndhāra), Kātyāyana from the Deccan (Dākṣiṇātya) and Patañjali from the Midland (Madhyadeśa), and as such, it might be said that they have all recorded the features of the Sanskrit language not recognised by one, but were current in their own locality. Between them, there is no quarrel, but they have criticised one, and rejected or accepted the conclusion of others. They covered a vast land of ancient India, and had recorded the Sanskrit language as was current in their times. But still one thing interesting to note is that they have never strangled

the life of Sanskrit by prescribing this or that rule, they have only suggested the possible words which should be regarded as correct, although it is a general belief that Sanskrit became fossilised by the norm of Pāṇini, and Pāṇini himself is responsible for the death of Sanskrit. The utter vagueness and the hopeless confusion of the entire system of writing a grammar is the cause of such a statement. The purpose of writing this paper is not to praise Pāṇini, but to show how erroneous this type of statement is, when we think of the growth of Sanskrit from the time of Pāṇini down to the present day. Poets and dramatists, and writers of all kinds have always violated the "norm" of grammar, whenever they wanted to give free vent to their genius, or when such and such phrases and idioms suited their writings. Writers of all kinds never adhered to the strict grammatical rules of language.

3. The purpose of grammar :

In fact, the main purpose of the grammarian is not to restrict the free expression of writers by prescribing rules for their language, but to tell how to express a sentence in a correct way, so that the meaning or sense of a word is not obscured. If we look upon the development of the science of grammar in India, we shall notice that most of the grammarians have emphasized the sense of a word more than even the rules of grammar. The grammarians' main purpose is on three things:

- (i) *śabdāsiddhi* (morphology or formation of words),
- (ii) *artha-nirṇaya* (semantics or meaning of words),
- (iii) *śabdārtha-vicāra* (connection between word and sense).

In his *Mahābhāṣya*, Patañjali has always emphasized these three elements while commenting on the sūtras of Pāṇini along with the vārttikas of Kātyāyana. In his opinion, words (or for that matter language) are used by people and words come spontaneously in the speech of people for which common folk do not go to the house of a grammarian for getting words to use, just as people go to the house of a potter for a pot to be made for them.

*tad yathā ghaṭena kāryaṃ kariṣyan kumbhakāra-kulaṃ
 gatvāha—kuru ghaṭaṃ, kāryaṃ anena kariṣyāmi, na tadvat
 śabdān prayokṣyamāṇo vāiyākaraṇa-kulaṃ gatvāha—kuru
 śabdān prayokṣy iti (Paspāśā).*

“Thus, for instance, a man who wants to use a jar goes to the potter’s and says : Make a jar, I want to use it. But a man who wishes to use words does not go to the grammarian’s and say : Make some words, I shall use them.”

The emphasis of Patañjali is to read grammar in order to avoid mistakes like *śaṣaḥ* for *śasaḥ*, *palāṣaḥ* for *palāśaḥ*, and *mañjakaḥ* for *mañcakaḥ*.

In the Pāṇinian school, later grammarians like Jayāditya and Vāmana, Bhaṭṭoji Dīkṣita, and Nāgeśabhaṭṭa lay stress on the formation of words, and the other schools followed the method of Pāṇini. But Bhartṛhari, Koṇḍabhaṭṭa and also Nāgeśabhaṭṭa explained the formative elements from a morpho-semantic point of view. Nāgeśabhaṭṭa, in a sense, belongs to all these three methods of grammatical expositions.

4. Grammatical Poems :

The grammatical poems in Sanskrit, though not wanting, are not in a large number. We have half a dozen poems beginning from the 6th/7th century down to the 17th century A.D., illustrating the rules of Pāṇini’s *Aṣṭādhyāyī*. The first well-known poem is *Bhaṭṭikāvya* belonging to the beginning of the 6th century, or at the latest to the middle of the 7th century. Another poem, perhaps, written on the model of *Bhaṭṭikāvya*, is the *Rāvaṇārjunīya* by Bhaṭṭa Bhīma (or Bhaumakavi), who flourished earlier than the 11th century A.D. It is written for the purpose of illustrating the rules of Pāṇini’s grammar following the regular order of the *Aṣṭādhyāyī*. To this class also belongs Hemacandra (1088-1172) who has written his historical poem *Kumārapāla-carita* in order to illustrate his own Sanskrit-Prakrit grammar—Sanskrit grammar in twenty and Prakrit in the remaining eight cantos. In the same way, Halāyudha (10th-11th centuries A.D.) has also composed a poem, named

Kavirahasya, which is a sort of lexicon of roots (*dhātupāṭha*), and which also describes the eulogy of Kṛṣṇa-rāja III of the Rāṣṭrakūṭa family who reigned in the Deccan between 940-956 A.D., and this book is a good contribution to grammatical lexicography and a guide to poets in the employment of verbal forms.

Two other books, *Vāsudeva-vijaya* and *Dhātukāvya* are supplementary and complementary to each other. The date of *Vāsudeva-vijaya* is not known. *Vāsudeva* comes from Puruvaru in Kerala and illustrates the entire *Aṣṭādhyāyī* in three cantos, while Nārāyaṇa (1560-1666 A.D.) completes the topic of the *Dhātupāṭha* not traversed by *Vāsudeva* in another three cantos bringing the narrative down to the death of Kaṁsa.

But the book which exclusively deals with the solecistic usage is the *Durghaṭavṛtti* by a Buddhist writer Śaraṇadeva who composed his book in 1172 A.D., under the supervision of Sarvarakṣita. The book deals with the knotty sūtras of Pāṇini's grammar explaining them in a manner which might be able to justify some irregular usages of Sanskrit writers. It is a good treatise of the so-called ungrammatical forms as used by poets from the hoary antiquity down to his time.

Another book, *Prakriyā-kaumudī-vimarśa*, edited by Valadeva Upādhyāya Misra, published from Benaras in 1966, also deals with some of the irregular usages. This book is an appendage to Rāmacandra's *Prakriyā-kaumudī* (14th/15th cent. A.D.) which is again a recast and re-arrangement of Pāṇini's sūtras before Bhaṭṭoji Dīkṣita. As all these books mentioned above illustrate the sūtras of Pāṇini, I will not include examples from these books in my discussion. I have collected the examples from the works of Kālidāsa, Bhāravi, Māgha etc., for ungrammatical expressions. We all know :

apaśabdaśatam Māghe Bhāravāu tu śatatrāyam /
Kālidāse na gaṇyante kavir eko Dhanañjayaḥ /

"There are a hundred ungrammatical words (*apaśabda*) in Māgha, three hundred in Bhāravi, and innumerable in Kālidāsa, and Dhanañjaya is the only poet (not having used ungrammatical words)."

Commentators have always tried to prove that poets are blameless (*niraṅkuṣāḥ kavayaḥ*) in the matter of using words. And so the ungrammatical forms of Vālmiki and Vyāsa are nothing but *ārṣa* as the Ṛṣis can do no wrong. As a result, out of respect, all the commentators have made endeavours to justify the usages of the ungrammatical expressions of the poets from time immemorial.

5. Grammar registers the facts of a language :

In my present paper I have discussed these ungrammatical forms from the linguistic point of view. My main idea is to look at the problem from the point of view of the Sanskrit language. Historically as well as linguistically all these so-called ungrammatical forms have a place in the language. To my mind, Sanskrit was not static, but had always been a dynamic force, and these irregular usages were the examples of that force. Language has a discipline of its own, and the grammarians have only recorded this discipline in the form of a sūtra which is nothing but a rule of the language. Pāṇini has recorded only this discipline of Sanskrit in the form of rules of the Sanskrit language. He has also recorded the views of other grammarians which show that Pāṇini has accepted some forms which were current at a particular area and at a particular time, even though they were not perhaps in use at the time of Pāṇini. He has also recorded some dialectal features by mentioning *prācām*, *udicām* etc., which show that some Sanskrit forms were current at a particular place even at the time of Pāṇini. Patañjali, at a later time, mentions how some words are peculiarly used in a particular area :

śavatiṛ gatikarmā Kambojeṣveva bhāṣito bhavati, vikāra enam āryā bhāṣante śava iti: hammatīḥ Surāṣṭreṣu, raṃhatīḥ Prācya-Madhyeṣu, gamireva tvāryāḥ prayuñjate, dātīṛ lavanārthe Prācyeṣu dātram Udicyeṣu. (Paspasā)

"In the country of the Kambojas the root *śu* is used in the sense of motion, but in the sense of transformation the word *śava* (dead body) is used by the Aryans in their speech, the root *hamma* is used in Saurāṣṭra and *raṃha* in Eastern

and Central India, but the Aryans use the root *gam* only. In the sense of cutting, the root *dā* is used in the East, whereas its noun form *dātra* is used in the North."

Linguistically, I believe, most of the usages had a history, and my main purpose is to unfurl that history of a word. Let us take some examples to explain the point in question.

6. Solecism in Sandhi :

In Sandhi some of the forms are regarded as ungrammatical. For example, in *triyambakam saṃyaminaṃ dadarśa* (Ku. III. 44), the form should be *tryambakam*. Mallinātha has explained it as follows :

'*iko yaṇaci iti tryambakam ityukte pādapūraṇa-vyatyāsāt triyambakam iti pāda-pūraṇārtho'yam iyaṇādeśaḥ chāndasaḥ mahākavi-prayogāt.*'

This shows that Mallinātha has, at least, tried to justify the usage for the sake of metre. If we look at the problem historically, we can say that this is one of the Vedic usages which crept into the classical Sanskrit. In the *Kātyāyana-śrautasūtra* (V. 10.1) we have a similar type of usage—*traiyambakān nirvapati mandrān eka-kapalān* etc. In order to sanction these types of forms Kātyāyana has, perhaps, made a *vārtika*—

"*iyaṇ-uvaṇ-prakarṇe tanvādinām chandasi bahulam upasaṅkhyānaṃ kartavyam. tryambakam triyambakam vā yajāmahe.*"

This shows that in Vedic *triyambaka* was in use. Vyāḍi and Gālava have also sanctioned *iyaṇ* and *uvaṇ* optionally in post-Vedic literature, and hence *triyambaka* and *tryambaka*, *bhūvādi* and *bhūvādi* can be used. In fact, Pāṇini has also quoted the views of Śākalya in this matter. He says—*iko' savame Śākalyasya hrasvaśca* (VI. 1. 127). In the opinion of Śākalya, the *ik* vowels (i.e. *i, u, ṛ, ʌ*) when followed by a non-homogeneous vowel, retain their original forms, and if the vowel is long, it becomes short, e.g., *dadhi+atra=dadhiatra*, or *dadhyatra*, *madhu+atra=madhuatra*, or *madhvatra*. This sūtra says that sometimes *i + a* may not come into union, they may remain contiguous, and when it

is a hiatus, *a* is to be pronounced in a lighter vein as *ya* and this is what is known as *ya-śruti*, a fact which is also recorded by Pāṇini in one of his sūtras in the name of Śākatāyana (*vyor laghu-prayatnatarah Śākatāyanasya*, VIII. 3.18) who says that *v* and *y* are pronounced with a lighter articulation before *aś* letter. So the *ya* in *triyambaka* can be regarded as an *ya-śruti*, though rare in Sanskrit, yet can be reckoned in Sanskrit as remnants of some Vedic forms, and therefore, the so-called rules of grammar are violated.

Similarly, in the example *maṇivoṣṭrasya lambete priyāu vatsatarāu mama*, the Sandhi in the portion '*maṇiva*' as *maṇi* (dual) + *iva* is not permissible by the sūtra *id-ūd-ed divacanaṃ pragṛhyam* (Pā. 1.1.11). As *maṇi* is a dual form, it cannot be combined with *iva*. In order to remove this irregularity, Kātyāyana has made a rule *idādīnām pragṛhyatve maṇivādinām pratiśedho vaktavyaḥ* which sanctions the formations like '*maṇiva*'. But later on, commentators, without using the vārttika of Kātyāyana, have justified it by quoting Amara who says *va vā yathā tathaiivaiva sāmye* (III. 4.9) which means that *va* or *vā* is used in the sense of similarity (*ivārthe*) and hence *maṇiva* is dissolved into *maṇi* + *va* or *vā+uṣṭrasya* and that will not break the *pragṛhya* rule. In a similar way, the other forms like *dampatīva*, *jampatīva* are to be justified.

If we look at the problem historically we can offer a different explanation. It is seen that in Vedic we have many words with *iva*, such as, *piteva* (I. 1.9), *śvaghnīva* (II. 12.4), *vijaiiva* (II. 6.5) *aśvājanīva* (V. 62.7), *aśvasyeva* (X. 34.3) etc., and in all these words *iva* is always considered as compounded with the preceding word. So it is seen that in the *padapāṭha*, words with *iva* are not separated as two words, but an *avagraha* is inserted before *iva* which shows that words with *iva* are considered as one compounded word. So instead of *pitā + iva*, it is given as *pitā/iva* etc. But when *iva* is found after the *pragṛhya*-words, it is still not separated as two distinct words. On the contrary, *iti* is placed after the *pragṛhya* words which are repeated after *iti*. For example, *ārtrī iva* (II. 39.5) is treated in the *Padapāṭha* as *ārtrī iva iti ārtrī/iva*. This type of analysis of the *pragṛhya* words in the

padapāṭha shows that *iva* is regarded as a part and parcel of the compound *ārtrī iva* and hence *iti* is placed after *iva* as shown above, and the compound thus analysed says that it is *ārtrī* that is *pragṛhya* (cf. *ārtrī ivādiṣvivāditih paraḥ* (CA. 1.82). That is why, the words cited above are analysed as *pitā/iva*, *vijah/iva*, *aśvājanī/iva*, *aśvasya/iva* etc. It is because of this, perhaps, the earlier grammarians think that *iva* is always compounded with the word immediately preceding. Hence the dictum—*iveha saha nityasamaso vibhaktyalopaśca pūrvapada-prakṛti-svaratvam ceti vaktavyam*, which says that the compound with *iva* is compulsory and there is no elision of *sup* when the compound is made with *iva* and it retains its original accent.

What I personally feel is that *moṇiva* is a *samāsa* rather than a Sandhi, and as *samāsa* with *iva* is compulsory, the rules of *pragṛhyas* are not followed. Similar type of examples, though not with the *pragṛhyas*, is found in *vāgarthāviva* (Raghu I, 1), *udbāhuriva* (Raghu. I. 3) etc. which are considered, according to Mallinātha, as *samāsa*, rather than *sandhi*. Though this type of *samāsa* with the *pragṛhya*—words is very rare in Sanskrit, these are some of the remnants of the Vedic usages.

7. Solecism in declension :

Solecism is also found in declension. There are some declensional forms which are ungrammatical. The formations of *udadhisya* in *udadhisyottare kule mṛtaḥ kim anuśocyate* and *bhikṣusya* in *atijarasya bhikṣusya kanthā varṣaśatam gatā*, both from the *Durghaṭa-vṛtti* of Śaraṇadeva, are ungrammatical, Śaraṇadeva has tried his best to justify even these two un-Sanskritic forms. His arguments are as follows :

udadhim icchatīti kyaci sarva-prātipadikebhyo lālasāyam asug vaktavya' ityatra sub ityeke iti subāgame apratyayāt (Pa. III. 3.102) *ityakāre udadhisyeti syāt*,

i.e. in short, Śaraṇadeva has founded the word *udadhisya* by means of the denominative suffix *kyac* used in the sense of intense yearning after that thing and then

the augment *asuk* is added to it. Alternatively, he has said — *ñasi purva-nipātena ata ityanuvṛtter anityatvāt*, which simply means that as the order of the sūtra is violated by placing *ñas* later than *ṭā* the genitive sign ending can be used in other bases also. All these efforts at justifying *udadhisya* and *bhikṣusya* show that there has always been a tendency to support an ungrammatical form by turning or twisting the sūtras of Pāṇini. But if we consider the growth of Sanskrit, we can say that these are the influences of Middle Indo-Aryan, mainly of Pāli and Prakrit, on Sanskrit. Both in Pāli and Prakrit, the genitive singular ending of all types of bases is *ssa* (Skt. *sya*). It is generalised side by side with other endings. In Buddhist Hybrid Sanskrit, *sya* is added to *i* and *u* bases as well. This type of usage is very late in Sanskrit, and hence many usages are not available. By the time of Śaraṇadeva, they began to appear on the horizon.

8. Solecism in adjectives :

In the case of adjectives also we come across some irregular usages. In the formation of the superlative degree either *iṣṭha* or *tama* is used, but not both. But there are instances where both are used. e.g. *Yudhiṣṭhiraḥ śreṣṭhatamaḥ kurūṇām*. In this usage *śreṣṭhatama* is ungrammatical. Grammarians or commentators have tried to solve this by saying — *yadā ca prakarṣavatām punaḥ prakarṣo vivakṣyate tadā ātiśāyikāntād aparāḥ pratyayo bhavatyeva* which simply means that when further excellence is indicated amongst superlatives, the words may take additional superlative suffixes. And hence, though *śreṣṭha* is superlative, it can take further superlative suffix *tama* to indicate the best of the best. This is also one of the Vedic remnants. We have *devo vaḥ prāpayatu śreṣṭhatamāya karmaṇe* (TS. 1.1.1).

Apart from its use in Vedic, it can be said that in the language when further excellence is intended to emphasize the situation, then double superlative suffixes are added to the word. Thus double suffixes also occur in Greek and Gothic to produce effect, e.g. Gk. *kunterōteros* (comparative), *prōtistos* (superlative), Goth. *frumists*. That is why,

Shakespeare has used — "This was the most unkindest cut of all" (Julius Ceasar, Act. III Sec. 2). So is the case with Sanskrit also.

9. Solecism in verbal forms :

In verbal system, there are lots of solecism. In the formation of perfect, there are some irregularities, particularly with reference to the sūtra *kṛñcānuprayujyate liṭi* (Pa. III. 1.40). The formation of *ukṣām pracakruḥ nagarasya mārḡān* (Bhaṭṭi, III. 5) should be *prokṣāṃcakruḥ nagarasya mārḡān*. Naturally grammarians and commentators fly into fancy to justify their irregular formation by giving explanation. The problem in this context is explained below :

In *ukṣām pracakruḥ*, the root *ukṣa* means 'to drench' and the preposition (*pra*) implies excellence (*utkarṣa*). Hence by the rule *te prāgdhatoḥ* (Pa. I. 4.80), the *upasarga* should come before *ukṣa* and the form would be *pra-ukṣa+kṛ+lit+us=prokṣāṃcakruḥ*. Here *ām* comes by the rule *ijādeśca gurumato' nṛcchah* (Pa. III. 1. 36), and by the rule *kṛñcānuprayujyate liṭi* (Pa. III. 1.40), there can also be *bhū* and as when *liṭ* follows. So we have other forms as well—*prokṣāmbabhūva*, *prokṣāmāsa* and also *prokṣāṃcakruḥ*. If that is the case, then how do we justify *ukṣām pracakruḥ*?

Bhaṭṭoji says that this is wrong. *pramāda evāyam viparyāsa-nivṛttyarthaṅca iti vārttika virodhāt*.

There are others who try to defend these usages in the following manner :

In general, some say that this is nothing but a poetic license '*niraṅkuśāḥ kavayaḥ*'. But this type of explanation does not involve any grammatical analysis.

The other authorities try to defend it by saying that in Pāṇini's sūtra *kṛñcānuprayujyate liṭi*, the '*anuprayoga*' means subsequent mention. Kātyāyana also wants the *anuprayoga* to be immediately after the *āmanta* word. So in his opinion, the form should be '*prokṣāṃcakruḥ*'.

There is another way to justify it. Haradatta (878 or 1100

A.D.) and others say that *āmanta* word could be "at any place", "at any distance." So Haradatta supports the separation of *āmanta* word, as he says—"*katham ukṣām pracakruḥ iti vārttikakāraḥ prcchayatām yaḥ paṭhati viparyāsa-nivṛtyartham vācyaṁ vyavahita-nivṛtyarthaṅca iti.*"

Mallinātha (bet. 1400-1532 A.D.) also supports this view in a different way. He says that *pra* implying excessiveness of the *dhātu* is included in the root *ukṣa*, itself. So there is no *vyavadhāna* here, nor is this an instance of *apaprayoga*, though he admits that the usages like '*tam pātayām prathamamāsa*' etc., are erroneous. He says—

"*vyavahita-viparyasta pūrva proyoga-niyamāt dhātvarthābhi-vyañjakādīnā dhātvakṣara-prāyatvācca propasargasya na vyavadhāyakatvam nāsādhutvam.*"

In order to avoid this sort of grammatical anomaly Jayamangala (11th-13th A.D.) reads *ukṣām pracakruḥ* as *ukṣān (mārgān) pracakruḥ*.

From the above analysis it can be said that there has always been a tendency among the grammarians and commentators to justify the so-called wrong usages of Sanskrit. They always try to twist the sūtras of Pāṇini into their favour. But if we look into the problem historically, it becomes easy for us to understand the formation of the word.

Linguistically this type of formation of words can be placed under the category of *tnesis* (cutting) which means separation of nouns and verbs from prepositions. It is well-known that in classical Sanskrit, the prefix (*upasarga*) stands immediately before the verbal form (*te prāg dhatoḥ*—I. 4.80). But in Vedic the prefixes need not come immediately before the verbs (*chandasi pare'pi*—I. 4.81), and sometimes the prefix can follow the verb (*vyavahitāśca*—I. 4.82). With regard to this type of usages Whitney says, "In the earlier language....its position is quite free: it may be separated from the verb by another word or words, and may even come after the form to which it belongs, it may also stand alone, qualifying a verb that is understood, or conjointly with

another prefix one that is expressed" (*Sanskrit Grammar*, p. 397-98). In the earlier language, especially in the *Ṛgveda*, they are found abundantly, e.g. "sa deva eha vakṣati" (I. 1.2) 'he shall bring the gods here', "sam pūṣan viduṣā naya" (VI. 5.1) 'conjoin us, O Pūṣan, with the knowledgeable man'. In the *Atharvaveda* this is also not wanting, e.g. "pra ṇa āyumuṣi tāriṣat" (II. 4.6) 'he may increase our lives'. In the *Brāhmaṇa* period they are more or less found restrictedly, e.g. "vi hyenena paśyati" (AB) 'for he sees by it.'

The formation of *ukṣām pracakruḥ* can be compared with this type of phenomena. Though this is not separated by preposition, its process is followed here (*vyavahita*). In classical period the preposition is not separated, and hence *pracakruḥ* is united, but *ukṣām* is regarded as an accusative singular. This is what is known as periphrastic perfect which is made by prefixing the accusative of a derivative noun-stem in *ā* to the perfect tense of an auxiliary verb : namely of *kr*, *bhū* and *as*. In the *Ṛgveda* this type of periphrastic perfect is not used at all, but in the *Atharvaveda* we have only one example, namely, *gamayām cakāra*. In the *Brāhmaṇa* period the periphrastic perfects begin to appear with the causative, denominative, desiderative and intensive or frequentative. Causative-based periphrastic perfects are mainly found in the *Śatapatha-Brāhmaṇa* along with a few desideratives. But from intensives they are practically unknown. Examples like 'atirecayām cakruḥ' (ŚB), 'mantrayām āsa' (AB), 'janayām āsa' (ŚVU), 'ikṣāmāsa' (ŚŚŚ) are available till the śrauta-sūtra period.

Like the perfect, combinations with other tenses are not unknown. In ŚŚŚ, we have *juhavām karoti*. This is perpetuated till the time of *Pañcatantra* where we have the usages like *vidām karoti*, *vidām karotu* and *kurvantu*. In a similar way, *ukṣām pracakruḥ* should be regarded as periphrastic perfect, and hence can be separated (*vyavahita*) as suggested by the commentators. Similar instances are *tam pātayām prathamam āsa papāta paścāt* (Raghu, IX. 16), 'prabhraṃśayām yo Nahuṣam cakāra' (Raghu, XIII. 36), *samyojayām vidhivad āsa sametabandhuḥ* (Raghu, XVI. 76) and so on. If we judge these types of usages in the light of the above discussion, then we can see that there is no

violation of grammar.

10. Conclusion

The above survey shows that though Sanskrit is or has been regarded as a language which strictly adheres to the rules of Pāṇini's grammar, there are ungrammatical or unconventional usages in the language throughout the centuries. This so-called irregular forms in the atmosphere of Pāṇini is an indication which proves beyond doubt that Sanskrit was not an orthodox or a static language, but a dynamic one. This dynamic nature of Sanskrit is responsible for such type of popular saying :

*mūrkhō vadati viṣṇāya jñānī vadati viṣṇave/
dvayor eva samam puṇyam bhāvagrāhī janārdanaḥ//*

"An uneducated person says *viṣṇāya*, whereas a learned man says *viṣṇave*, equal merit goes to both, for Janārdana knows the inner spirit."

Similarly, there is a proverb among the Naiyāyikas that they do not care for any grammatical purity. They say—*asmākūnām Naiyāyikeṣām arthani tātparyam śabdani kościntā*; "logicians like us give emphasis on meaning, and not on grammatical formation of a word."

In the *Naiṣadha-carita* (22/84), it is aptly said :

*bhaṅktum prabhur vyākaraṇasya darpaṃ
pada-proyogādhvani loka eṣaḥ/
śaśo yad asyāsti śaśi
tato'yam evaṃ mṛgo'syāsti mṛgīti noktaḥ//*

"In the use of words common people destroy the pride of the grammarians; because one who has got a *śaśa* (sign) is called *śaśi* (Moon), but, in a similar way, one who has got a *mṛga* (sign) is not called *mṛgī* (Moon)?"

So Solecism in Sanskrit literature is to be judged from its historical point of view.*

* This article of mine is reprinted here from Professor H.P. Malladevaru's Commemorative Volume, 1993 with additions and alterations.

Appendix III

SANSKRIT LINGUISTICS : PAST AND FUTURE

After the epoch-making pronouncement of Sir William Jones in 1786, the study of linguistics began. Sir William Jones did not mention the name Indo-European, but he has mentioned that Sanskrit, Greek and Latin came from a "common source" which perhaps no longer existed. This announcement of Sir William Jones can be regarded as the foundation of comparative philology, a subject which was established almost after a century of Sir William Jones's announcement. Scholars started looking for the "common source" though there was no common name for this common source. In 1808 Schlegel was the first man who used the term *comparative grammar* in his book *On the Language and Wisdom of the Indians*. The outcome of this comparative grammar is Franz Bopp's *The Conjugation System* where Bopp has compared the Sanskrit conjugation system with that of Greek, Latin, Gothic and other Indo-European languages. This book though a little antiquated serves the purpose of the comparative aspects of the verbal system of the languages mentioned above. After a few years Bopp wrote a comparative grammar of Sanskrit, Zend, Greek, Latin, Lithuanian, Gothic and German in three volumes between 1833 and 1836. In this book Bopp has described the grammatical functions on a comparative basis of the languages mentioned above. In a sense that is the first full comparative grammar of Indo-European languages. The same Bopp wrote a comparative grammar on accent in 1854. This book deals with the accent of Sanskrit and Greek. Though the name of the 'common source' of Sir William Jones was still not given, people actually compared the Indo-European languages, their common vocabularies and grammatical structure on the basis of Bopp's contribution to comparative languages.

The first scholar, as far as we know, was August Schleicher who used the term '*Indo-Germanische Sprachen*' in 1861-62 in his *Compendium der vergleichenden grammatik der indogermanischen Sprachen*. In the meanwhile Ferdinand de Saussure in his book *Mémoire sur le système primitif des voyelles dans les langues indo-européennes* published in 1878 hinted at the conception of *Schwa* in Indo-European which, later on, gave birth to the idea of laryngeal theory. The final culmination of Indo-European philology is found in the contributions of Karl Brugmann and Berthold Delbrück's famous monumental work '*Grundriss der vergleichenden grammatik der indogermanischen sprachen*' which came out between 1886 and 1900 in several volumes, and the Indo-European philology was completely established and Jones's dream was also fulfilled.

In the 19th century there were several achievements of Indo-European philology. First, after the announcement of Sir William Jones the 'sense of comparativeness' grew up in the first-half of the 19th century. Secondly, the discovery of Sanskrit gave them opportunity to compare Sanskrit with Greek, Latin and other cognate languages. Sanskrit accent and verbal system and other grammatical features were compared with Greek, Latin and other languages. In the third place, the common name of all these cognate Indo-European languages was given. Four names were suggested: the Aryan, Indo-Germanic, Indo-Celtic and Indo-European. The first three names are defective or faulty as a common name for a hypothetically reconstructed IE language.

Besides these three achievements there were other discoveries as well. Several laws of Indo-European were also discovered in the 19th century. These are Grimm's law (1822), Grassmann's law (1862), Verner's law (1876), Brugmann's law of nasalization (1876), Collitz's law (1878), Siever's law (1878), Fortunatov's law (1883) and Bartholomae's law (1882-7). Scholars began to realize that there were laws of phonology, and they were very regular. The 19th century was a century for discoveries of Indo-European.

In the last century one of the most important as well as

difficult topics of Indo-European linguistics was the study of Indo-European etymology. August Friedrich Pott (1802-87) wrote his principal work on Indo-European etymology, *Etymologische Forschungen auf dem Gebiete der indogermanischen Sprachen*, Lemgo, 1833-1836 (new edition in 10 volumes 1859-1876). August Fick (1833-1916) has also written a book on Indo-European etymology : *Wörterbuch der indogermanischen Grundsprache in ihrem Bestande vor der Völkertrennung*, Göttingen, 1868 (2nd edition 1870-1871, 3rd edition 1871-1876). In the subsequent edition, the title was *Vergleichendes Wörterbuch der indogermanischen Sprachen*. In the present century J. Pokorny's *Indogermanischen Etymologies Wörterbuch*, München, Vol. I 1949, Vol. II 1959, is a continuation of the previous studies on the subject.

In this connection it should be mentioned that some scholars have equally written books on Sanskrit etymology. M. Mayrhofer's Sanskrit Etymological dictionary named *Kurzgefasstes etymologisches Wörterbuch des Altindischen*, Heidelberg, 1956-72 was published. R.L. Turner's *A Comparative Dictionary of the Indo-Aryan Languages*, London, 1952-1971, is a landmark for the etymological dictionary of New Indo-Aryan languages. Though Indo-European etymological dictionaries are not getting prominence after Pokorny, the etymological dictionaries of other Indo-European languages, such as, Greek, Latin etc. are not also wanting. However, though a little old C.D. Buck's *A Dictionary of Selected Synonyms in the Principal Indo-European Languages*, Chicago, 1949, is worth mentioning. The basic idea of this dictionary is to trace the history of ideas among the Indo-European people. However, although we have quite a number of Indo-European dictionaries, we still need a sort of Encyclopaedic work on the etymological dictionary of the Indo-European people. There are still some words which have not been studied from the Indo-European point of view, and as such not included in the existing dictionaries. L.H. Gray in his article *Fifteen Prakrit and Indo-European Etymologies* (JOAS, 1940) has traced fifteen Prakrit words back to Indo-European origin. And these words are not found in the aforesaid dictionaries. As far as Sanskrit is

concerned, the Sanskrit dictionary on historical principles published by the Deccan College, Poona, will be an outstanding work in human history when it is completed. Similar is the case with the Prakrit dictionary on historical principles being published by the Bhandarkar Oriental Research Institute. These two books when published will surpass many dictionaries of outstanding merits. However, in modern times people's attention is being drawn to the composition of dictionaries of various types.

But in the 20th century the Indo-European linguistics turned to a new direction. The last century was a century for discoveries. Lots of languages now belonging to the Indo-European group were discovered and the studies of individual Indo-European language were made. The 20th century can be considered as a century for interpretation. Though new discoveries are being made, the old discoveries are also reinterpreted with a new outlook. For example, the existence of *schwa* which started from Ferdinand de Saussure (1878) culminated in the publication of the Problem of the *Schwa* by T. Burrow. Although most of the problems of *schwa* are dissipated by the discovery of Hittite and its laryngeal theory, Burrow has independently explained most of the out-of-the-way formation of some Sanskrit words which, in his opinion, is due to *schwa*. However, the problem of *schwa* is still not complete, and yet we have advanced quite a lot from Saussure who had just indicated the existence of it in Indo-European as early as 1878.

There are some other problems which are still a subject of discussion among many Indo-Europeanists. One of such problems is the origin of the retroflexes in Sanskrit. The pioneer in this theory was Robert Caldwell who in his book *A Comparative Grammar of the Dravidian Languages* (first edition 1854, second edition 1875, third edition revised by K.R. Ramaswami Sastri in 1938 and published by the Annamalai University) has advocated that the cerebral sounds of Sanskrit were borrowed from the Dravidian languages. The main contention of his idea is that as in Indo-European there is no cerebral sound, Sanskrit must have borrowed it from Dravidian. There has been lots of discussions for and against this theory. Some have accepted

it and some have rejected it. However, as far as we know, Fortunatov was the first who has advocated the Indo-European origin of Sanskrit cerebral sounds. And this is known as Fortunatov's law in Indo-European books. Some other scholars like W.S. Allen (*Retroflexion in Sanskrit*, BSOAS 16, 1954), E.P. Hamp (*Indo-Iranian Journal* 24, 1982) and many others have tried to prove that for the cerebral sounds in Sanskrit the influence of Dravidian languages is not essential. Lastly, again Eric P. Hamp in one of his articles on the *Indo-European Origins of the Retroflexes in Sanskrit* published in the *Essays on Indo-European Linguistics* (ed. by S.R. Banerjee, The Asiatic Society, Calcutta 1990) has attempted to trace the origin of the Sanskrit retroflex sounds and has reconsidered the case all anew for the origin of Sanskrit retroflex sounds and he has totally denied the Dravidian influence on the origin of retroflexes in Sanskrit and has revised the Fortunatov's law by means of more materials sometimes with the help of laryngeal sounds apart from what Fortunatov has already stated. He has also pointed out that some of the Avestan sounds (mainly the voiced sibilants) may also be responsible for the origin of Sanskrit retroflex sounds. However, perhaps his is not the last word for the solution of this problem, but scholars will find a difficult task in refuting his arguments.

There are some other problems in Indo-European which have not yet drawn the attention of scholars. In one of my articles—*Some Problems of Historical Linguistics*—presented in the 13th International Congress of Linguists, held in Tokyo, in 1982, I pointed out that OIA *pitā* (or *pitar*), Gk. *patēr* from IE* *pāter-s* side by side with OIA *dadāmi*, Gk. *didōmi*, OIA *gāus*, Gk. *boûs*, posed some problems. The reduplication with *i-* in Greek and *a* in OIA, *-āus* as long in OIA and *ous* short in Greek will be difficult to explain, if we do not consider them as dialectal differences. It will be difficult to reconstruct the Indo-European word from *dadāmi* and *didōmi*. As *ə* becomes *i* in OIA, and *a* in Greek, we cannot explain *dadāmi* and *didōmi* with *ə* in IE, and in that case the position will be reversed; that is, *a* in OIA and *i* in Greek. In a similar way, in Greek we have *mātēr* and *mētēr* and *mātā* in OIA, whereas the Indo-European form could

be either **mātēr* or **mētēr*. In fact both the forms are preserved in Greek, one being dialectal, and the other is supposed to be a direct descendant from Indo-European. So also the case with OIA *ani-ti* (he breaths), *ani-la* (wind), Gk. *anemos*, Lat. *animus*, *anima* and the Indo-European form will be either **anə* or **ane*. Unless, we think that all these discrepancies can be thought of as special developments in the respective languages, we cannot get any solution from the Indo-European side, unless we assume that these discrepancies started even at the time of Indo-European. Antoine Meillet's *Dialectes Indo-Européen*, Paris, 1908, and H. Birnbaum and Jaan Puhvel's text on *Ancient Indo-European Dialects*, 1966, do not help us in solving this type of problems.

Though phonologically there are some sounds which were once accepted as belonging to Indo-European, are now discarded on the basis of comparative sound system. There was a time when in Indo-European *x* and *γ* were accepted in order to prove Sanskrit *h* corresponding to Gk. *γ* (e.g. Skt. *aham*, Gk. *egōn*). We have now accepted Indo-European palatal voiced aspirate i.e. **ǵh* for the equation of these two sounds. Actually the Indo-European palatal **ǵh* would result in Sanskrit *jh* and Iranian *žh*. And this *jh* of OIA, perhaps ultimately is reduced to *h* as *žh* becomes *z* in Avestan. Even though we have this solution, the fact remains that there are cases particularly in Sandhis where this *jh* of OIA is preserved and naturally the development of Indo-European palatal **ǵh* into *h* is not discerned. In a similar way, we have the *θ*, and *δ* sounds in Indo-European, but these are summarily discarded by later writers. The point is that in the earlier discoveries of Indo-European sounds there were voiceless and voiced spirants which are altogether omitted from the pages of Indo-European history.

The basic problem of Indo-European in modern times is that some problems of OIA sounds are not historically and thoroughly discussed. A comparative study of all the *Prātisākhya*s and *Śikṣā*s is necessary. There were some piecemeal works and some of my students have worked on these, but a thorough detailed study is necessary for the sake of Indo-European. For example, in the *Śikṣā*s,

particularly in the *Bhāradvāja Śikṣā*, three different types of *y* and *v* are mentioned. And these are termed as *guru*, *laghu* and *laghutara*. And these three different types are also represented in some *Brāhmaṇa* literature. In the *Śatapatha-Brāhmaṇa* of the *Mādhyandina* branch, the *guru* type of *y* and *v* are perhaps represented. In the *Bhāradvāja Śikṣā* (ed by E. Sieg, Berlin, 1892) it is said that the *guru* semivowels are used initially and to show that *gurutva*, the initial *v* or *y* is doubled. e.g. *yeva* is written as *yyeva*, similarly *va* or *vā* is written as *vva* or *vvā*. As far as I know, this phenomenon is not as such recorded by any writer, except one of my students who has done an article on it. It is often suggested that this *guru v* can be represented by *w* and from that point of view the value of *w* and *v* is not the same. The *laghu y* or *v* was often elided in Prakrit. The Prakrit grammarians have said that intervocalic *y* or *v* are often elided. We believe that because this *y* or *v* is light and hence there is every possibility that *y*-ness or *v*-ness will be elided. The third category as *laghutara* is what is known as *ya-śruti* in Prakrit. That is to say, the Prakrit grammarians have said that some of the intervocalic consonantal sounds like -k-, -g-, -c-, -j- t-d- etc. are often elided leaving behind their vowel elements, and this vowel element is often pronounced with a lighter *ya*, known as *ya-śruti* or in Indian term *laghu-prayatnatara-ya-śruti*. Although we believe that there are some sounds or grammatical elements which can be developed in their own ways in a particular language, this problem of a particular language should be explained in the light of the indigenous materials.

Apart from phonological variations from language to language, there are some morphological problems also. Apart from others, I can think of some verbal problems. Karl Brugmann and Berthold Delbrück in the last three volumes of their famous monumental work have done something on a comparative syntax and verb has got a prominent place there. Delbrück has, of course, studied the tense system from a comparative point of a view. The uses of the tenses like present, past and future are elaborately discussed, and of them, again the three past tenses of Sanskrit, such as, Imperfect, Aorist and Perfect, took the largest portion of the

whole discussions. In one of my books — *Indo-European Tense and Aspect in Greek and Sanskrit* (1983) — I have thoroughly discussed, as far as possible, the usages of the perfect tense of Homer and the R̥gveda on a comparative basis. My main purpose of discussion is based on aspect, a subject which has not got much attention of the Indo-European scholars. The ten *gaṇas* of the present tense of Sanskrit is not aspectually discussed. There are one or two articles where some verbal forms of some *gaṇas* are casually discussed, but a thorough aspectual study of all these ten *gaṇas* is a desideratum.

A look at the verbal system of Sanskrit and Greek has led scholars to believe that there were, at least, three stem-systems, if not four, in IE, and each stem-system must have some distinctive aspectual meanings which, perhaps, were lost in course of the development of the Indo-European languages. These three or four stem-systems are Present, Aorist, Perfect and Future. In each stem-system there are tenses, moods, infinitive, participle and gerund. The stem-formation of each stem-system is distinct from the other; e.g. in the present stem-system the root $\sqrt{bhū}$ becomes *bhava* with the vikaraṇa -a- and whenever this *bhava* occurs the basic aspectual meaning will be the sense of continuation. So, *bhavati* means he is and the action continues to be like that for some time. The personal suffix -ti indicates the present tense and the base *bhava* indicates the continuity of that action. So, *abhavat* means 'he was' and continued to be like that for some time. So also *bhaviṣyati*. In the Aorist stem-system the root *bhū* remains all the time. So *abhūt* means 'he was' and here the sense of continuity is not indicated and whenever this *bhū* base is retained the sense of continuity is not indicated. In the perfect stem-system the root is reduplicated. So the root *bhū* becomes *babhū* and this *babhū* means 'he becomes something', perhaps which he was not before. So, to give a concrete example we can say *sa rājā abhavat* means 'he was a king and continued to be a king for some time.' The continuity of his kingship is important and so when the author indicates to express that idea of continuity he will use the form *abhavat*, but *sa rājā abhūt* means 'he was a king' and only this piece of

information is indicated by the aorist stem formation. The writer is not interested in the idea whether he continued to be a king for some time, but he wants to give only this information to the reader that somebody was a king and that's all. So the tenses are used in a narrative sense, where events are described one after another. *sa rājā babhūva* means 'he becomes a king' (which he was not before). Apart from these three basic meanings, there are other aspectual meanings as well, but the basic meanings of these three stems are not lacking. However, this type of study has not been thoroughly done in modern times. What Delbrück did nearly 100 years ago, was followed by Renou in his *La Valuer du Parfait dans les Hymnes védiques* (Paris, 1925), and yet the study was not exhaustive. T. Elizarenkova sometime in 1960 made some studies of the Sanskrit aorist on the basis of Sanskrit aorist-system. (*Aorist v R̥gveda*, Moskova, 1960; *On the problems of the developments of Tenses in Old Indo-Aryan*, 25th International Congress of Orientalists, Moscow, 1960, pp. 167-74). Lately, in my book entitled *Indo-European Tense and Aspect in Greek and Sanskrit*, Calcutta, 1983, I have given a comprehensive account, as far as possible, of the aspectual use of Homeric perfect in comparison with the *R̥gveda* together with occasional references from Latin, Gothic and Avestan. The subject is a vital one and the attention of the scholars has been drawn to this subject. The subject will not only help to understand the relationship of Greek and Latin on the one hand, but also Indo-European on the other. However, I believe that one day a thorough survey of this aspect of linguistic study will be focused in future.

As I have already mentioned earlier, a thorough and comparative study of the *Prātiśākhya*s and the *Śikṣā*s on the basis of phonetic analysis of the Sanskrit language has long been a need for the Sanskritists and the Indo-Europeanists. Since the publication of Max Müller's *R̥gveda Prātiśākhya* in 1856 and Whitney's *Taittirīya Prātiśākhya* (1871) and *Atharvaveda Prātiśākhya* (1869) scholars became a little interested in the study of the *Prātiśākhya*s. Later on, Mangaldeva Shastri (*R̥gveda Prātiśākhya*, 1937), Sūryakānta (*R̥ktanta-vyākaraṇa*, 1933, *Atharva Prātiśākhya*, 1939) have

edited the above mentioned three *Prātisākhya*. But a comparative study of all the *Prātisākhyas* has not yet been thoroughly made. It was only Siddheshwar Varma who studied on a comparative basis the *Śikṣās* and published his *Critical Studies in the Phonetic Observations of Indian Grammarians* in 1929 from London. In fact, this is the only critical study of the *Śikṣās* and still no further study is made as a supplement to Varma's work. W.S. Allen's *Phonetics in Ancient India* (Oxford, 1953) deals only with the phonetics of the Sanskrit language. Recently Cardona has worked on Pāṇini's grammar and was planning to publish it in eight volumes of which one volume was published in 1988. Although his study will be a monumental one when finished, his first volume shows that it was not going to be a comparative study with the *Prātisākhyas* and *Śikṣās*. To my mind, it seems that systematic linguistic study on Pāṇini's grammar is seriously wanted. Even S.M. Katre's book on Pāṇini in several volumes is not a linguistic study. When I mean the linguistic study of Pāṇini's grammar, my idea is to discuss the pattern of *Sūtras* of Pāṇini from the linguistic point of view. It is not the philosophy of Pāṇini's grammar as it is done in the later stages by Bhartṛhari and Mādhavācārya, it is the study where the linguistic principles are intertwined.

Perhaps it will not be out of place here if I mention that a comparative study of all the Sanskrit grammatical systems of India has not yet been done. There are lots of features of the Sanskrit language which are recorded in the later schools of Sanskrit grammars. The *Kalāpa*, *Cāndra*, *Śakaṭāyana*, *Aindra*, *Mugdhabodha*, *Samkṣiptasāra*, *Sārasvata* and many others are not critically and comparatively studied. Many features of the late Sanskrit language are preserved in the books of all these grammarians. It will be interesting to note them; e.g. Pāṇini has sanctioned the 6th and 7th case-endings for *nirḍhāraṇa*, whereas Bopadeva has accepted that in the *nirḍhāraṇa* 5th, 6th, and 7th case-endings are possible. As a result, the reading of *ajātamṛta-mūrkhebhyaḥ mṛtā-jātāu sūtāu varaṇ* (*Pañcatantra*) is accepted by the aphorism of Bopadeva, whereas in most of the editions the reading *ajāta-mṛta-mūrkhebhyaḥ* is corrected as *ajāta-mṛta-*

mūrkhāṇām in conformity with the Sūtras of Pāṇini. If we can do this we shall be able to say that the Sanskrit language is not a static one, but dynamic and from time to time lots of new formations were incorporated into the language, apart from the influence of MIA and to some extent of NIA.

Last but not least, I shall mention here that a comparative study on the concepts of grammatical categories is necessary, and in this respect, a comparative study should be made with Greek and Latin grammarians. I myself have done some, but a thorough study is to be made as early as possible.

In the end, I can only say that in the twenty-first century, linguistic study should be made exclusively on a new horizon and lots of unpublished works are to be published for the sake of Indo-Europeanists. Let us hope, that the linguists of the 21st century will start to ransack these new horizons and enrich our linguistic science with new discoveries.*

* This paper was read at the International Seminar on Indology held at Poona University in the Department of Sanskrit in 1996. It has been thoroughly revised and augmented.

Appendix IV

NON-ARYAN INFLUENCE ON SANSKRIT

Language Families in India :

In India four linguistic families are found and they are Dravidian, Austro-Asiatic, Sino-Tibetan and Indo-European. Sanskrit belongs to the Indo-European family of languages. Indo-European (=henceforth IE) has nine branches excluding Hittite, of which Indo-Iranian or Aryan is one. This Indo-Iranian branch has two off-shoots : Iranian which includes Avestan and Old Persian, and Indian which has Sanskrit which again spread from the West to the East through the Northern belt of India. This Sanskrit language is also called Aryan (*-ārya*) language, and therefore other than Aryan, all the other families are non-Aryan. So the rest of the families of India, such as, Dravidian, Austro-Asiatic and Sino-Tibetan and even other families are non-Aryan languages.

These four families lived in India side by side for a long time. And therefore the influence of one on the other is quite possible. But it is not easy to detect the influence of one on the other. So it is difficult to find out the influence of non-Aryan on the Sanskrit language.

The influence of one on the other can be found mainly in vocabulary. The grammatical influence is very difficult to get. Yet scholars have shown that there are some grammatical influences as well. Among the non-Aryan languages, the Dravidian family has influenced the Sanskrit language most. Though scholars are not always unanimous on this point, the influence is detected there.

1. Influence on Sanskrit Vocabulary

Normally the borrowings of words from one language into the others are very easy. Words so borrowed are generally normalised in the language. So is the case with Sanskrit also. Scholars have pointed out that Sanskrit has

borrowed many words from other languages. The following examples are given below :

1. Babylonian

Max Müller has found one Babylonian word in the R̥gveda. In his opinion *manā* found in the following RV (VIII. 78.2) is a Babylonian word :

*ā no bhara vyañjanam
gām aśvam abhyañjanam /
sacā manā hiraṇyayā //*

—“O Indra, bring to us a brilliant jewel, a cow, a horse, an ornament, together with a golden *manā*.”

Monier-Williams in his *Sanskrit-English Dictionary* (1899, 1956) has given the meaning of *manā* as “devotion, attachment, zeal, eagerness, RV. envy, jealousy”. And he has also given a compound word with *manā* as *manā-vasu* “rich in devotion, faithful”. But these meanings are not applicable to the above verse.

2. Austric

In a similar way, *mayūra* is considered as an Austric word. But the word occurs in the third Maṇḍala of the R̥gveda. So some scholars do not believe that this is an Austric word.

It is interesting to note that the Austric (Muṇḍā family) word *Kol* Sanskritised as *Kolla* (also a Prakrit word) is an early Aryan modification of an old Muṇḍā word meaning ‘man’. Professor Przyluski also accepts this explanation. Professor S.K. Chatterji has suggested some more Austric words in Indo-Aryan. These Austric words are as follows :

Skt *bāṇa*, *pināka*. For *pināka* (= *pin* + *āka*) the *āka* is *āg* (Semang), *ak* (Stieng), *āk* (Riang) and *ānuk* (Malay).

Skt. *cucuka* (female breast) cf. Malay *susu* may be onomatopoeic.

Skt. *aṅgāra*, Semang *anggu*.

Skt. *kapola*, Sakai *kapa*, face.

Skt. *nārikela*, Malay *niyor* (coconut) and *kontu kōlai*. *nārikela* is a combination of *niyor* and *kōlai*.

Skt. *kamaṭha*, *kaṛkaṭa* cf. *kātam* (Malay), *khatam* (Mon).

Skt. *bheka*, Sakai *tabeg*, Malay *buāk*. Compare *bhāuā* *beng* in some Bengali dialects.

Skt. *jaṅghā*, Semang and Sakai *jukn*, Mon *jōng*, Stieng *jung*. Schmidt thinks that the word is a Sanskrit loan in Austric.

Skt. *jalūkā*, *jalaūkā*, Senoi *jēlō*, Khmer *jhlōng*, Stieng *glu*. Uhlenbeck suggests an Indo-European origin of this word.

Skt. *maśaka*, Khmer *mūs*, Sakai *kumus*. Uhlenbeck derives it from Indo-European, cf. Lithuanian *masalai*, Russian *mosoliti*, cf. Greek *mūs* etc.

Pkt. *cikkhillā* (mud), Old Bengali *cikhila*, Hindustani *kīcāḍ* is a Austric word from Semang *cica*.

Skt. *saṛṣapa* = Pkt. *sāsava* is still unexplained. cf. Malay *śāsawi*. The Malay word may be a Prakrit borrowing; but it is Skt. and not Pkt., which furnishes Aryan loans in Indonesian. [Chatterji].

Skt. *indura*, *undura*, cf. Khmer *kāndōr* (rat).

Skt. *taṇḍulā*, Sakai *cendaroi*, *cendroi*.

Skt. *plihā* (spleen). Semang *kēm-pil*, *kēm-pal*. But Uhlenbeck explains it as Indo-European **speyhā*.

Skt. *ghaṇṭa* (bell), Sakai *gentang*, Malay *gëndang*.

Skt. *halāhala* (poison) cf. the Austric word for snake is Semang *hāle* (*hali*).

Skt. *vātingaṇa*, *vātigaṇa*, Bengali *bāigaṇ*, *begun* (brinjal) might be derived from a group Semang* *bāh* + *tiṅg*.

Besides these, there are Skt. words like *dāḍimba*, *kadamba*, *nimba*, *rambhā*, *alābu* (*lābu*), *nimbu*, *jambu(rā)*, *guḍa* (molasses) and many more of similar nature are borrowed from Austric.

Jean Przyluski in his article *Non-Aryan Loans in Indo-*

Aryan has listed some more words from Austric. These are *mātaṅga*, *makuṭa*, *mukuṭa*, *kadali*, *bāla*; *kadamba*, *simbala* (the flower of cotton tree), *lāṅgala*, *lāṅgula*, *liṅga*, *karpāsa*, *paṭa*, *karpāṭa* and many others.

In the whole range of Sanskrit words, there are very few Austric words in Sanskrit. Scholars are not unanimous regarding the Austric words in Sanskrit, and yet they believe that the words mentioned above are the Austric words entered into the vocabulary of Sanskrit.

3. Sino-Tibetan

Of the Sino-Tibetan words, one is very famous in usage. The word *cīna*, a fine silk, is a Chinese word used by Kālidāsa in his *Abhijñāna-Śakuntala* as *cīnāṃśukam iva ketoḥ* (like the China silk-cloth of a banner). In the *Mahābhārata* and in the *Śakti-saṃgama-tantra*, the boundary of the Chinese country is given :

kāśmīraṃ tu samārabhya kāmārūpāt tu paścime /
bhotāntadeśe deveśi mānaseśācca dakṣiṇe /
mānaseśād dakṣapūrve cīnadeśaḥ prakīrtitaḥ //
[Śakti-saṃgama-tantra]

It is surprising to note that the Sanskrit word *bhoṭa* is a Tibetan *Bod* (as pronounced till the 7th century A.D.) which has been Indianised as *bhoṭa*.

The word *Nepāla* (or *Nepāl*) seems to be a Tibeto-Burman word. "It would appear, however", says Professor Chatterji, "that the name came from that of a Tibeto-Burman speaking tribe, the ancestors of the present day Newar people, and consists of two elements, a prefix *Ne-* of uncertain meaning (it may be the name of some hero-king or priest among the tribe) and the proper tribal name *Pal* or *bal*, the meaning of which in Newari is lost, although in Tibetan—the word *bal* means 'wood'. The Tibetans call the Nepalīs, i.e., the Newaris particularly, *Bal-po*, i.e. the *Bal-men*." (*Kirāta-jana-kṛti*, p. 64).

4. Dravidian

Rev. Robert Caldwell in his famous book, "A Comparative

Grammar of the Dravidian or South-Indian Family of Languages (1875, revised 3rd edn. 1961) has pointed out that Sanskrit has borrowed many words from the Dravidian. In his opinion the following Sanskrit words are borrowed from the Dravidian tongues :

akkā (mother), *attā* (mother), *aṭavi* (a jungle), *amba* (father), *ambā* (mother), *āli* (a woman's female friend), *kaṭu/kaṭuka* (sharp, pungent), *kalā* (art), *kuṭi* (a house), *nānā* (several), *nīra* (water), *palli* (a city), *mīna* (a fish), *valgu* (handsome), *śava* (a corpse), *sāya* (the evening) and many others. Whether these words are borrowed by Sanskrit or otherwise, is a matter of investigation.

5. Egyptian

Professor Suniti Kumar Chatterji has drawn our attention to the fact that the Sanskrit word *mudrā* has come to India through the Persians. In his words, "About 250 B.C., a definite connexion was established between India and Egypt. Possibly by this time, the Indians came to know about the land of the Kusha people—Ethiopia or Nubia—from the Persians, as much as the Persian name for Egypt, *Mudrā* from the Semitic (Hebrew) *Mizraim* (the Egyptians themselves used to call their country *Khem*), came to India as *mudrā* (as in the Sanskrit word *mudrā*, which meant *flat* (Egyptian) *seal*, as opposed to the round *cylinder* seal of the Babylonians which was at first adopted by the Persians). (*India and Ethiopia*, p. 13).

2. Influence on Grammar :

I. Phonology

The sound systems of Sanskrit, both Vedic and classical, are the same, except the two sounds of Vedic cerebral *ḷ* and *ḻ*. Though the Indian authorities have said that intervocalic *d* and *dh* become cerebral *ḷ* and *ḻ* respectively, some scholars think that these two sounds are also borrowed from the Dravidian; e.g., the first mantra of the R̥gveda contains cerebral *ḷ*, e.g., *agnim ḷe* (1.1.1.). This fact is recorded by

Ṣaḍguruśiṣya in his commentary on Kātyāyana's *Sarvāṇukramaṇī* (under RV. 1.28) thus :

aj-madhyastha-ḍ-kārasya ḷ-kāraṃ Bahvrcā jaguḥ /
aj-madhyastha-ḍh-kārasya ḷh-kāraṃ vai yathākramam //

For example, *ile*, *mṛle* *puroḷāsam*, *dr̥ḷhā*, *sāl̥hā* *ṣaḷarvī*, *jih̥ḷa eṣā*.

Though these sounds are abundantly found in the Ṛgveda, these two sounds *ḷ* and *ḷh* came down to the *Aitareya Āraṇyaka* stage, though the frequency is less than in the RV. In later Vedic and classical Sanskrit, they are completely lost. But in the *Jaiminīya Gṛhya-sūtra* *ḷ* is used for *ḍ*, e.g. *kāraḷi*. However, this is a moot question, and to decide categorically the influence of the Dravidian tongue is a difficult task.

It is interesting to note that in some New Indo-Aryan languages, such as, Mārāṭhī, Pānjābī, Gujarāṭī and Oriyā the Vedic *ḷ* is preserved. In some other dialects, such as, Mārwāri and some Himālayan dialects, and in some villages of Central Doab, this sound *ḷ* is heard in their pronunciation. For example, in Central Doab *l* of *pīpal* (fig tree) is pronounced with cerebral *ḷ* (Kellog, *Hindi Grammar*, p. 3).

The grammatical influence of a language over the others is not easily discernible. So is the case with Sanskrit. Caldwell has also suggested that Sanskrit has borrowed the cerebral sounds from the Dravidian, a family of languages which is full of cerebral sounds. As cerebral sounds are not found in Indo-European, nor even in Avestan and Old Persian, Sanskrit could not get this sound from the inherited sources. So the native languages of the Dravidian group must have influenced Sanskrit when it came in contact with the Dravidian languages. The Tamil has only *ṭ* and *ṇ* and some cerebral sibilants. But Sanskrit has levelled the full series (*ṭ*, *ṭh*, *ḍ*, *ḍh*, *ṇ* and *ṣ*) in order to maintain the parity with the other sounds. So Sanskrit has five cerebral sounds along with *ṣ*.

As IE does not possess any cerebral sounds, the Sanskrit cerebrals obviously became a problem. As a result, most of the scholars think that Sanskrit has got them from the

Dravidians. But long ago, Fortunatov (1883) gave the rules for the origin of Sanskrit cerebrals from IE. His simple rule was that in the combination of *l* + dental, the dental was cerebralised provided the *l* disappeared; e.g., IE **paltos* > Skt. *paṭas*, 'cloth', Old Church Slavonic *platino*, Russ. *polotno*, 'linen'. IE *paltus* > Skt. *paṭus* 'sharp', cf. Gk. *platus*. At that time this view was accepted by many scholars, such as, Bechtel, Windisch, Darbishire and many others. But Brugmann, Bartholomae, Schmidt and Wackernagel prefer to believe that the combination of *l* + dental became cerebral due to Prakritic influence. This problem was again discussed by Eric P. Hamp in his paper *On the Indo-European Origins of the Retroflexes in Sanskrit*. He has not accepted the Dravidian influence for the origin of Sanskrit cerebrals. However, the origin of Sanskrit cerebrals can also be explained without the Dravidian languages.

II. Morphology

Sanskrit has inherited all the morphological elements from IE. And naturally there is hardly any influence of non-Aryan languages. Yet some scholars suggest that in morphology also the Indo-Aryan was profoundly influenced by Dravidian. In modern languages, particularly in Bengali, there may be some declensional suffixes which are borrowed from Dravidian, but in OIA the Dravidian influence is not found. "For the Bengali plural suffixes *rā*, *-gulā* (*-guli*) which first came into use probably as late as the 14th century, it would be extremely hazardous to suggest a Dravidian affinity, in the Tamil plural affixes *-ar*, *-gaḷ* for instance, notwithstanding the partial argument between the two that in Bengali *-rā* is restricted to intelligent beings, or creatures to which intelligence is ascribed, and the Dravidian *-ar* is employed with reference to 'high caste' nouns, i.e., names of intelligent beings (ODBL, p. 173)." However, it is quite agreeable to think that in modern NIA languages, the Dravidian influence may be traced, but in OIA it is not discernible. In declension, pronoun and verbal systems, the Indo-European suffixes and prefixes are fully predominant. So morphologically there is nothing worth mentioning of Dravidian influence.

Appendix

Avesta

Avestan Text
Yasna IXSanskrit Rendering
Yajña IX

1. hāvanīm ā ratūm ā
Haomō upāit Zaraθuštrēm,
Ātrēm pairi yaozdaθəntəm
gaθās-ca srāvayaṇtəm.
ā-dim pərəsaṭ (Zaraθuštrō):
“kō, narə, ahī ?
yim azəm vīspahe aṇhēuš
astvato sraēštəm dādarəsa,
χʼahe gayehe χʼanvatō
(aməšahe)”.
[1]

- savanīm ā ṛtum ā
Soma upait Zaraθuštram
atrim pari-yos-dadhantam
gāθāśca śrāvayantam
ā tam pṛcchat (Zaraθuštraḥ)
ko nar asi
yam ahaṃ vīśvasya asoḥ
*asthivataḥ śreṣṭham dadarśa
svasya gayasya *svanvato
(mṛtasya) [1]

At the hour (of) early morning Haoma came up to Zaraθuštra, (who was) cleaning (the altar) for the fire and (was) chanting the Gāthās. Unto him asked Zaraθuštra : “Who, O Hero, art thou, whom I see the noblest of all material creation, shining with (thine) own eternal light ?”

2. āaṭ mē aēm paityaoḥta
Haomō ašava dūraoṣō :
“azəm ahmi, Zaraθuštra,
Haomō ašava dūraoṣō.
“ā-mām yāsaṇuha, Spitama,
frā-mām hunvaṇuha χʼarətēe,
“aoi mām staomaine stūiḍi
yaθa mā (aparacit) Saošya-
ntō stavān.”
āaṭ me ayaṃ pratyavocata
Somo ṛtāvā duroṣaḥ
aham asmi Zaraθuštra
Somo ṛtāvā duroṣaḥ
ā mām yācasva Spitama
pra mām sunuṣva aśnave
abhi mām stomani studhi
yathā mā (*aparecit)
sošyantah *stavān [2]

Thereupon this Haoma, the righteous, hard to overcome, replied unto me : “I am, O Zaraθuštra, Haoma, the righteous, hard to overcome. Fix (thy) desires earnestly upon me, O Spitama, worship me (in order) to enjoy (of me), hymn me in hymn(s) of praise, as the other Saošyants have praised me.

3. āaṭ aoḥta Zaraθuštrō :
(nəmo Haomāi !)
āaṭ avocata Zaraθuštro
(namaḥ somāya)

"kas-ṭhwaṃ paoiryō, Haoma,
maśyō

astvaiṭhyāi hunūta gaēṭhyāi?

"kā ahmāi aśiṣ ṛəṇāvi ?

ciṭ ahmāi jasaṭ āyaptəm?"

kastvaṃ pūrvyah Soma

martyah

*asthivatyāi sunuta gethāyāi

ka asmā āsiḥ *ṛṇāvi

kim asmāi gacchat āptam [3]

Thereupon said Zaraṭuštra : "Salutation unto Haoma! Which mortal, O Haoma, (was) the first (who) worshipped thee for (the sake of) the material world ? What blessing unto him was granted ? What profit to him accrued ?"

4. āat mē aēm paityaoḥta
Haomō aśava dūraoṣō;
Vivaṇhā mām paoiryō maśyō
astvaiṭhyāi hunūta gaēṭhyāi;
hā ahmāi aśiṣ ṛəṇāvi
tat ahmāi jasaṭ āyaptəm :
yat hē puṭrō us-zayata,
yō yimō ḡśaētō, hwāṭwō,
ḡʳəṇaṇuhastəmō zātanām,
hvarə-darəsō maśyānām;
yat kərənaot aiṇhe ḡśaṭrāḡa
amarṣəṇta pasu-vīra,
aṇhaoṣəmne āpa-urvaire;
ḡʳairyāṇ ḡʳarəṇm ajayamnəm.

āt me ayam pratyavocata
Somo ṛtāvā duroṣah
yivasvān mām pūrvyo martyah
*asthivatyāi sunuta gethāyāi
sā asmā āsiḥ *ṛṇāvi
tad aśmai gacchat āptam
yad asya putra *ujjāyata
yo yamaḥ *kṣetaḥ suvantā
*svaraṇavattamo jātānām
svadṛšo martyānām
yat kṛṇodasya kṣatrādā
amarīṣyantā paśuvirā
aśuṣyamāne *āpor vare
aśitave aśanam *ajjeyam [4]

Thereupon this Haoma, the righteous, hard to overcome, replied unto me : "Vivaṇhvat (was) the first mortal (who) worshipped me for (the sake of) the material world. This blessing unto him was granted, this profit to him accrued : namely, to him a son was born, who (was) Yima the King, the magnificent, the most resplendent of (all) created beings, (who shone forth) among mortals like unto the sun in appearance : who made during his rule both animals and human beings undying, (and) waters and vegetation ever fresh; (there was) inexhaustible food for feeding (his subjects).

5. yimahe ḡśaṭre aurvahe
nōiṭ aotəm āṇha nōiṭ garəṃməm,
nōiṭ zaurva āṇha, nōiṭ mərəṭhyuṣ,
nōiṭ araskō daēvō-dātō :
pañcādasa fracarōiṭhe
pita-puṭras-ca raoḡaēṣva
(katarascit)

yamasya kṣatre *urviyasya
net *odam āsa net gharmam
net jarā āsa net mṛtyuḥ
net *reṣako *devadhātaḥ
pañcadaśā pracarete
pitā putraśca *roheṣu ā
(katarascit)

yavata χṣayōiṭ hwāθwō
Yimō Vīvaṇhato puθrō.

yāvat akṣayet suvantā
yamo vivasvataḥ putraḥ [5]

During the rule of the illustrious Yima (there) was neither (excessive) cold nor (excessive) heat, neither was (there) old age nor death, nor (was there) envy created of the Daēva. Father and son moved about, each (seeming) only fifteen (years) in appearance as long as Yima the magnificent, the son of Vīvaṇhvāt, reigned.

6. kasə-θwām bityō, Haoma
mašyō
astvaiθyāi hunūta gaēθyāi ?
kā ahmāi ašiš ərənāvi ?
ciṭ ahmāi jasaṭ āyaptəm ?

kastvām dvitīyaḥ Soma
martyaḥ
*asthivatyāi sunuta gethāyāi
kā asmā āśiḥ *ṛnāvi
kim asmai gacchat āptam [6]

(Zaraθuštra asked :)

"Which mortal, O Haoma (was) the second (who) worshipped thee for (the sake of) the material world ? What blessing unto him was granted ? What profit to him accrued ?"

7. āaṭ mē aēm paityaoχta
Haomō ašava dūraošō :
Āθwyō mām bityō mašyō
astvaiθyāi hunūta gaēθyāi;
hā ahmāi ašiš ərənāvi
taṭ ahmāi jasaṭ āyaptəm :
yaṭ hē puθrō us-zayata
visō sūrayā θraētaonō.

āt me ayam pratyavocata
Somo ṛtāvā duroṣaḥ
aptyo mām dvitīyo martyaḥ
*asthivatyāi sunuta gethāyāi
sā asmā āśiḥ *ṛnāvi
tad asmai gacchat āptam
yad asya putraḥ *ujjāyata
viśaḥ śūrāyāḥ traitāṇaḥ [7]

Thereupon this Haoma, the righteous, hard to overcome, replied unto me : "Āθwya (was) the second mortal (who) worshipped me for (the sake of) the mortal world. This blessing unto him was granted, this profit to him accrued : namely, unto him a son was born, θraētaona of the valiant race".

8. yō janat Ažim Dahākəm
θrizafnəm, θrikaməədəm
χṣaš-ašim, hazaṇrā yao-χštīm,
aš-aojaṇhəm, daēvim drujəm,
ayəm gaēθāvyo, drvaṇtəm.
yām aš-aojastəmām drujəm
fracā kərəntat Aṇgro-Mainyuš

yo hanat ahiṃ daṃśakam
*triṣṇmaṇam *ṛika-mūrdhānam
śalakṣam sahasrayuktim
atyāujasaṃ dāivim druham
agham gethābhyo dravantam
yām atyāujastamām druham
prāk kṛntat Aṇro-manyuḥ

aoi yām astvaitīm gaēθāṃ
mahrkāi Aṣahe gaēθanām.

abhi yām *asthivatīm gethām
mrce ṛtasya gethānām [8]

"Who slew the dragon Dahāka, three-jawed, three-skulled, six-orbed, (and) of a thousand wiles, the very strong devilish Druj, (who was) evil unto living (creatures, and) unbelieving : whom Anro-Mainyu hewed out (as) by far the strongest Druj against this material world, for the destruction of the creations of Aša."

9. kasə-θwām θrityō, Haoma,
mašyo
astvaiθyāi hunūta gaēθyāi ?
kā ahmāi ašiš ərənāvi ?
ciṭ ahmāi jasaṭ āyaptəm ?

kastvām ṛṭiyah Soma
martyah
*asthivatyāi sunuta gethāi
kā asmā āsiḥ *ṛṇāvi
kim asmāi gacchat āptam [9]

(Zaraθuštra asked :)

"Which mortal, O Haoma, (was) the third (who) worshipped thee for (the sake of) the material world ? What blessing unto him was granted? What profit to him accrued ?"

10. āaṭ mē aēm paityaoṣta
Haomō ašava dūraoṣō :
θritō (Sāmanām səvištō)
θrityō mām mašyō
astvaiθyāi hunūta gaēθyāi,
hā ahmāi ašiš ərənāvi,
taṭ ahmāi jasaṭ āyaptəm :
yaṭ hē puθra us-zayōiθe
Urvāṣṣayō Kərəsāspas-ca;
tkaēṣō anyō dāto-rāzō
āaṭ anyō uparō-kairyō,
yava, gaēsus, gaḍavarō.

āt me ayaṃ pratyavocata
Somo ṛtāvā duroṣah
tritaḥ (sāmānām śaviṣṭha)
ṛṭiyo mām martyah
*asthivatyāi sunuta gethāyāi
sā asmā āsiḥ *ṛṇāvi
tad asmāi gacchat āptam
yad asya putrā *ujjāyete
Urvākṣakah kṛśāśvaśca
*ticakṣā anyo *dhātārājah
ād anya uparikāryah
yuvā keśavo *gadābharah [10]

Thereupon this Haoma, the righteous, hard to overcome, replied unto me : θrita, the most powerful of the Sāma-family, (was) the third mortal (who) worshipped me for (the sake of) the material world. This blessing unto him was granted, this profit to him accrued : namely, unto him were born two sons, Urvāṣṣaya and Kərəsāspa; the one a Teacher (and) Lawgiver, and the other a supremely energetic, youthful, curly-haired, mace-wielder.

1. yō janat aṣim srvarəm
yim aspo-garəm, nərə-garəm,

yo hanat ahim Śṛṅgabharam
yam aśva-garaṃ nara-garam

yim viṣavaṇtəm, zairitəm,	yam viṣavantam haritam
yim upairi viṣ araodaṭ	yam upari viṣam arohat
ārṣtyō-barəza zairitəm :	*rṣṭibarhaḥ haritam
yim upairi kərəsāspō	yam upari kṛsāśvaḥ
ayaṇha pitūm pacata	ayasā pitum pacata
ā rapiṭwinəm zrvānəm;	ā rapithvinam *jrayānam
tafsaṭ-ca hō mairyō χ'isaṭ-ca;	*tapsat ca sa maryaḥ svidyat ca
frāṣ ayaṇhō frasparat	prāk ayasaḥ prāsphurat
yaeṣyaṇtim āpəm parāṇhāt;	yasyantim *āpam parāsyat
parāṣ tarṣto apatacat	parāṇ trasto apātaṇcat
naire-manā Kərəsāspō.	naramanāḥ kṛsāśvaḥ [11]

"Who (Kərəsāspa) slew the horned dragon, who (was) horse-devouring (and) man-devouring, who (was) poisonous (and) green, (and) upon whom (all over the body) the poison rose green to the height of a spear; upon whom Kərəsāspa cooked (his) food in an iron (pot) at noon-tide; and that serpent grew hot and began to sweat, (and) forth from (under) the iron (pot) sprang away, (and) upset the boiling water : startled, Kərəsāspa, (even though) of manly heart, fled away in the opposite direction."

12. kasə-θwām tūiryō, Haoma	kas tvām turyaḥ Soma
mašyō	martyaḥ
astvaiṭyāi hunūta gaēṭyāi ?	*asthivatyāi sunuta gethāyāi
kā ahmāi aṣiṣ ərənāvi ?	kā asmā āśiḥ *ṛṇāvi
ciṭ ahmāi jasaṭ āyaptəm ?	kim asmāi gacchat āptam [12]

(Zaraθuštra asked :)

"Which mortal, O Haoma, (was) the fourth (who) worshipped thee for (the sake of) the material world ? What blessing unto him was granted ? What profit to him accrued ?"

13. āaṭ mē aēm paityaoχta	āt me ayam pratyavocata
Haomō aṣava dūraoṣō :	Somo ṛtāvā duroṣaḥ
Pouruṣaspō mām tūiryō mašyō	Puru-aśvo mām turyo martyaḥ
astvaiṭyāi hunūta gaēṭyāi.	*asthivatyāi sunuta gethāyāi
ha ahmāi aṣiṣ ərənāvi,	sā asmā āśiḥ *ṛṇāvi
taṭ ahmāi jasaṭ āyaptəm :	tad asmāi gacchat āptam
yaṭ hē tūm us-zayaṇha,	yad asya tvam *ujjāyathāḥ
tūm, ərəzvō Zaraθuštra,	tvam rjo Zaraθuštra
nmānahe Pouruṣaspahe,	damasya Puru-aśvasya
vidaēvō, Ahura-ṭkaēṣō.	*vi-devo *asurāṭicakṣāḥ [13]

Thereupon this Haoma the righteous, hard to overcome, replied unto me : "Pouruśaspa (was) the fourth mortal (who) worshipped me for (the sake of) the material world. This blessing unto him was granted, this profit to him accrued : namely, unto him *thou* wast born, thou, O righteous Zaraθuštra, in the house of Pouruśaspa, (thou who art) opposed to the Daēvas (and) follower of the Law of Ahura !

14. Srūtō Airyene Vaējahe
tūm paoiryō, Zaraθuštra,
Ahunām-Vairīm frasrāvayō,
vībərəθwantəm āxtūirīm,
aparām xraoždyehya frasrūiti.

śruta Ārye-Bije
tvaṃ pūrvaḥ Zaraθuštraḥ
Ahunaṃ Vairyaṃ prāsrāvayaḥ
*vibhṛtavantam *ātūryam
(aparam) *kruṣṭatarā prāsrūti [14]

Famed through (all) Airyana-Vaējah, thou, O Zaraθuštra, (wast) the first, (who) recited aloud the Ahuna-Vairya, with the proper divisions (of metre and syllables), four times, (and yet) another (time) with a louder chant.

15. tūm zəmar-gūzō ākəranavō
viṣpe daēva, Zaraθuštra,
yōi para ahmāt vīrō-raoḍa
apatayən paiti āya zəmə;
yō aojīštō, yō tančištō,
yō θwaxšīštō, yō āsīštō,
yō aš-vərəθrajaštəmō
abavat Mainivā dāmān.

tvaṃ *jmāguhaḥ ākṛṇoh
viśvān devān Zaraθuštra
ye parā asmāt *Vīra-rohāḥ
(a)patayan prati ayā jmā
ya ojiṣṭhaḥ yas tvañciṣṭhaḥ
yas tvakṣiṣṭhaḥ ya āsiṣṭhaḥ
yo ativṛtrahantamaḥ
abhavat manyvoḥ *dhāmāni [15]

"Thou O Zaraθuštra, caused all the demons to hide underneath the earth, who before this (thy coming), ran about upon this earth in human shape, (thou) who (art) the strongest (and) bravest, who (art) the most active (and) the swiftest, (and) who hast become in the highest degree victorious among the creatures of the (two) Spirits."

16. āat aoxta Zaraθuštrō
nemō Haomāi ! vaṇhuš Haomō
huṣātō Haomō, arśdātō,
vaṇhuš-dātō baēšazyō
hukərəšs, hvarəšs, vərəθraja,
zairi-gaonō nāmyāsuš;
yaθa xʷarənte vahištō
urunaē-ca pāθmainyōtəmō.

āt avocata Zaraθuštraḥ
namaḥ Somāya vasuḥ Somaḥ
*sudhāta Soma *ṛsidhātaḥ
*vasudhātaḥ bhāiṣajyaḥ
sukṛp suvṛk vṛtrahāḥ
(hariguṇaḥ namrāmśuḥ
yathā śnuvate Vasiṣṭhaḥ
Urvāne ca *pathavattamaḥ [16]

Thereupon Zaraθuštra said : "Salutation unto Haoma ! Haoma (is) excellent, well-created is Haoma, truth-created (as well); created by excellence, (and) health-given; well-shaped, working for good, (and) victorious; golden-hued (is he) with bending twigs; just as (he is) best for (the body) of the drinker, (so) also (he) best points out the way unto (the soul)."

17. nī-tē, zāire, maðəm mruyē,
nī aməm, nī vərəθraγnəm,
nī dasvarəm, nī baēšazəm,
nī fradaθəm, nī varədaθəm,
nī aojō višpō-tanūm,
nī mastīm, višpō-paēsaṇhəm;
nī taṭ yaθa gaēθāhva
vasō-χšaθrō fracarāne
tbaēšō-taurvā drujəm-vanō.

ni te hare madam bruve
ni amam ni * Vṛtragham
ni dasvaram ni bheṣajam
ni *pradadham ni vardham
ni ojo višvatanum
ni matim višvapeśasam
ni tad yathā gethāsu ā
*Vaśakṣatraḥ pracarāṇi
dviṣturvāṇo druhamvanah [17]

I ask of thee, O Golden-hued, for fervour, for power (and) for success (as well); for health (and) for the means of gaining health; for advancement (and) for increase; for strength of (this) whole body, (as well as) for wisdom all-embracing; for (all) this (I ask) so that in (all) lands I may move about free at will, overcoming opposition, (and) conquering evil.

18. ni taṭ yaθa taurvayeni
višpaṇām tbišvatām tbaēšā
daēvanām mašyānām-ca
yāθwām pairikanām-ca
sāθrām kaoyām karafnām-ca
mairyanām-ca bizangranām,
aṣəmaoyanām-ca bizangranām,
vehrkanām-ca caθwarə-
zangranām,
haēnyās-ca pərəθu-ainikayā
davāiθyā patāiθyā.

ni tad yathā turvayāṇi
višveṣām dvišvatām dviṣaḥ
devānām martyānām ca
yātūnām * parikāṇām ca
śāstā- *kava- *kṛpaṇānām ca
maryāṇām ca dvijaṅghānām
ṛtamoghānām ca dvijaṅghānām
vṛkāṇām ca catur jaṅghānām
senāyāśca prthvanikāyāḥ
davantyāḥ patantyāḥ [18]

(And I ask) for (all) this so that I may overcome the enmity of all (my) enemies, — (both) of Daēvas and of mortals, of wizards and of witches, of tyrants wilfully blind and wilfully deaf, and of two-legged serpents, and of two-legged distorters of the truth, and of four-legged wolves, also (that I may overcome) the armies (of all such foes) rushing and dashing onwards in a wide battle array.

19. iməṃ θwām paoirīm yānəm, imam tvām pūrvyam *yānam
 Haoma, jaiḍyemi, dūraoṣa : Soma gadyāmi duroṣa
 vahiṣṭəm ahūm aṣaonām, *vasiṣṭham-asum ṛtāvanām
 raocaṇhəm viṣpō-χvāθrəm, rocasam *viśva-svanitram
 iməṃ θwām bitīm yānəm, imam tvām dvitīyam *yānam
 Haoma, jaiḍyemi, dūraoṣa : Soma gadyāmi duroṣa
 drvatātəm aiṇhāśə-tanvō, *dhruvatātim asyāḥ tanoh
 iməṃ θwām θritīm yānəm, imam tvām ṛtīyam *yānam
 Haoma, jaiḍyemi, dūraoṣa : Soma gadyāmi duroṣa
 darəyō-jitīm uštānahe, *dirghajitīm uštānasya [19]

This (is) the first gift, O Haoma, hard to overcome, (that) I request (of) thee : the best world for the righteous, bright and all-glorious. This (is) the second gift, O Haoma, hard to overcome, (that) I request (of) thee : health for this body (of mine). This (is) the third gift, O Haoma, hard to overcome (that) I request (of) thee : long continuance of (my) vital powers.

20. iməṃ θwām tūirīm yānəm imam tvām turīyam *yānam
 Haoma, jaiḍyemi, dūraoṣa : Soma gadyāmi duroṣa
 yaθa aēṣō (amavā) θrāfəḍō yathā *eṣa amavān ṛptaḥ
 fraṣṭāne zəmə paiti, pra[ti]ṣṭhāni jma[ya] prati
 tbaēṣō-taurvā drujəm-vanō, dviṣturvāṇo druhamvanah
 iməṃ θwām puḥḍəm yānəm, imam tvām *paṃktaṃ *yānam
 Haoma, jaiḍyemi, dūraoṣa : Soma gadyāmi duroṣa
 yaθa vərəθrajaṃ vanat-pəṣanō yathā Vṛtrahā vanatpṛtanah
 fraṣṭāne zəmə paiti, pra[ti]ṣṭhāni jma[ya] prati
 tbaēṣō-taurvā drujəm-vanō, dviṣturvāṇo druhamvanah [20]

This (is) the fourth gift, O Haoma, hard to overcome, (that) I request (of) thee : that I, happy and powerful, my task accomplished, may progress through the world overcoming opposition, conquering evil. This (is) the fifth gift, O Haoma, hard to overcome, (that) I request (of) thee : that I, victorious, (and) battle-winning may progress through the world overcoming opposition, conquering evil.

21. iməṃ θwām χṣtūm yānəm, imam tvā ṣaṣṭham *yānam
 Haoma, jaiḍyemi, dūraoṣa : Soma gadyāmi duroṣa
 paura tāyūm, paura gaḍəm, pūrva tāyūm pūrva gadham
 paura vāhrkəm būiḍyōimaiḍe: pūrva vṛkaṃ budhyemahi
 mā-ciś paura būiḍyaēta nō mākiḥ pūrvo budhyeta no
 viṣpe paura būiḍyōimaiḍe. viśve purva budhyāmahi [21]

This (is) the sixth gift, O Haoma, hard to overcome, (that) I request (of) thee: may we become aware beforehand (of) the robber, beforehand (of) the murderer, (and) beforehand (of) the world. Let not any (of) our foes become aware beforehand (of) us, (but) may we become aware beforehand (of) all.

22. Haomō aēibiš yōi aurvantō
hita taṣṣanti arənāum,
zāvarə aojās-ca baṣṣaiti.
Haomō āzīzanāitibiš
daḍāiti ṣṣaētō-puθrim,
uta ašava-frazaintim.
Haomō taē-cit yōi katayō
naskō-frasānhō aṇhante,
spānō mastim-ca baṣṣaiti.

Somaḥ ebhyo ye arvantah
sitā *takṣanti *araṇam
javaḥ Ojaśca *bhakṣayati
Somaḥ ājījanantibhyaḥ
dadhāti kṣayat putram
uta ṛtāvat prajātim
Somaḥ te-cit ye katayah
naska-prāsāsāḥ āsante
śunam matim ca bhakṣayati [22]

Haoma granteth strength and courage unto those warriors who urge well-trained (pairs of) steeds to victory. Haoma bestoweth upon women (who are) bearing a brilliant son (and) a righteous progeny as well. Haoma granteth wisdom and fervour into all those householders who are occupied in teaching scriptures.

23. Haomō tāś-cit yā kaininō
aṇhaire darəyem aṇvō
haiθim rādəm-ca baṣṣaiti,
moṣu jaiḍyamnō huṣratuṣ.

Soma tāscit yāḥ *kanināḥ
āsire dirgham agruvaḥ
satyam *rādham (ca) bhakṣayati
makṣu gadyamānaḥ sukratuḥ [23]

Unto all those who have remained virgins for a long time, without husbands, Haoma doth grant faithful and loving (bridegrooms), as soon as the Wise One is entreated.

24. Haomō tēm-cit, yim Kərəsānim, Somastam-cit yam kṣānum
apa-ṣṣaθrəm nišādayat,
yō raosta ṣṣaθrō-kāmya,
yō davata : "nōit mē
apām aθrava aiwištis
vərəidyē daiṇhava carāt;
hō viṣpe vərəidinām vanāt,
nī viṣpe vərəidinām janāt.

apa kṣatram *nišādayat
yo aroddha kṣatra-kāmā
yo *dhunata no it me
apām atharvā *abhyastih
vṛddhaye dasyāu carāt
sa viśva-vṛddhinām vanāt
nī viśva-vṛddhinām hanāt [24]

Him indeed, (who) was Kərəsāni did Haoma cast down from his power, (him) who was swelled up in his pride of sovereignty, (and)

who (had) bragged : "Never henceforth shall any priest, learned in the Avesta, go about for (the sake of bringing) prosperity into my land; (otherwise) he might overcome the whole of (my) grandeur, (he) might strike down the whole of (my) greatness.

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| 25. ušta-tē, yō xʷā aojaṇha | *uṣṭam te yaḥ svā ojasā |
| vasō-xšaθrō ahi, Haoma : | *vasakṣatraḥ asi Soma |
| ušta-tē, apivatahe | *uṣṭam te [yo] *apivitse |
| pourvacām əṛəzuχdanām; | puruvacasām rjūktānām |
| ušta-tē, nōit pairi-frāsa | *uṣṭam te net *pariprāsā |
| əṛəzuχdəm pərəsahi vācim. | rjūktam prcchasi vācam [25] |

Hail to thee ! O Haoma, who through (thine) own power art thine own master. Hail to thee ! who dost understand the truthful word full-spoken. Hail to thee ! never dost thou question by cross-questioning the word true uttered.

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| 26. frā-tē Mazdā barat | pra te *mahaddhāḥ [a]bharat |
| paṛvanīm aiwyāṇhanəm | *pūrvānam *abhiyāsanam |
| stəhr-paēsaṇhəm, Mainyū- | starpeśasam manyū-taṣṭam |
| tāstəm, | |
| vaṇuhīm daēnām Māzdayasnīm | vasvim *dhyānām *mahaddhā- |
| | yajñīm |
| āat aiṇhe ahi aiwyāstō | āt asyāḥ asi abhiyastāḥ |
| barṣnuš paiti gairiṇām | *barhaṇum prati giriṇām |
| drājaṇhe aiwiḍāitiš-ca | *drāghase abhidhāteśca |
| gravas-ca māθrahe. | *gr̥bhas c[ā pi] mantrasya [26] |

Forth for thee did the Almighty bring the first (sacred) girdle, star-begemmed, woven by the two Spirits—(the girdle which is) the excellent religion of Mazda-worship. Since then, invested with this (girdle), thou has been (dwelling) upon the mountain heights, through all ages (entrusted with) the words, and meanings too, of the Scirptures.

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| 27. Haoma, nmānō-paite, viś-paite, Soma | *dama-pate Viś-pate |
| zan̥tu-paite, daiṇhu-paite, | *jantu-pate *dasyu-pate |
| spanaṇha vāēdyā-paite ! | *śvanasā [ca] vidyā-pate |
| amāi-ca θwā vərəθraṇnāi-ca | amāya (ca) tvā *vṛtraghnāya (ca) |
| māvōya upa-mruyē tanuyē | *mabhyam upabruve tanve |
| θrimāi-ca yat pouru-baoχšnahe. | *trimāya (ca) yat purubhojase [27] |

O Haoma ! Lord of the house, Lord of the village, Lord of the

province, Lord of the land, (and) through (thy) holiness Lord of (all) Wisdom! Thee I invoke for courage and victory as well, for my ownself, and for strength that bringeth salvation unto many.

28. vi-nō tbišvatām tbaēššōbis,
vi manō bara graməntām,
yō ciš-ca ahmi nmāne,
yō aiṇhe viši, yō ahmi zantvō
yō aiṇhe daiṇhvo,
aēnaṇhā asti mašyō,
gəurvaya-hē pādave zāvarə
pairi-šē uši vərənūiḍi
skəndəm šē manō kərənūiḍi.

vi no dvišvatām dveṣebhyaḥ
vi mano bhara gharṃavatām
yaḥ [kaḥ] cit [ca] asmin dame
(yo asyām viši yo asmin jantāu
yo asyām dasyāu
enasvān asti martyaḥ
grbhāya asya padbhyām javaḥ
pari asya uṣi *vṛṇudhi
khinnam asya manaḥ
*kṛṇudhi [28]

Away from the hatred of enemies and away from the (enmity) of angry foes do thou remove our mind(s): and whosoever the mortal, who in this house, who in this village, who in this province, (or) who in this land is full of evil, from (both) his nether-limbs take (thou) away strength, turn his brains upside-down, (and) reduce to disorder his mind.

29. mā zbaraθaēibya fratuyā,
mā gavaēibya aiwi-tūtuyā;
mā zām vaēnōiṭ ašibya,
mā gām vaēnōiṭ ašibya,
yō aēnaṇhaiti nō manō,
yō aēnaṇhaiti nō kəhrpəm.

mā *hvṛtābhyām pratuyāḥ
mā *grābhābhyām abhitūtuyāḥ
mā jmām *venāt akṣibhyām
mā gām *venāt akṣibhyām
ya *enasyati no manaḥ
ya *enasyati naḥ kṛpam [29]

Give not strength unto (his two) crooked-shanks, nor power grant unto (his two) grasping-paws; let him not view this earth with his eyeballs, let him not behold the creation with (his) eyeballs, who works harm to our mind, who does injury (to) our body.

30. paiti ažōiš zairitahe,
simahe višō-vaēpahe,
kəhrpəm nāšəmnāi ašaone,
Haoma zāire, vadare jaiḍi;
paiti gaḍahe vīvarəzdavatō
χrvīšyatō zazarāno,
kəhrpəm nāšəmnāi ašaone,
Haoma zāire, vadare jaiḍi;

prati aheḥ haritasya
*śimasya viša-vāpasya
kṛpam *našmane ṛtāvane
Soma hare vadhar *jadhi
prati gadhasya vivṛktavataḥ
*kravišyataḥ *jāhṛnāna[sya]
kṛpam *našmane ṛtāvane
Soma hare vadhar *jadhi [30]

Against the serpent, green, dreadful (and) poison-breathing, smite, O golden Haoma, (thy) weapon for protecting the body of the righteous. Against the murderer, acting contrary (to the Law), blood-thirsty (and) fuming, smite, O golden Haoma, (thy) weapon for protecting the body of the righteous.

31. paiti maṣyehe drvatō
sāstarś, aiwi-vōizdayantahe
kamarādām,
kəhrpəm nāṣəmnāi aṣaone,
Haoma zāire, vadarə jaiḍi;
paiti aṣəmaoṣahe, anaṣaonō,
ahūm-mərəncō, aiṇhā daēnayā
māṣ vaca daṭānahe,
nōit śyaoṭnāiḥ apayantahe,
kəhrpəm nāṣəmnāi aṣaone,
Haoma zāire, vadarə jaiḍi.

prati martyasya dravataḥ
śāstuḥ *abhivejayataḥ kamūr-
dhānam
kṛpam *naṣmane ṛtāvane
Soma hare vadhar *jadhi
prati *ṛtamoghasya anṛtavataḥ
*asumṛcaḥ asyā *dhyānāyāḥ
*mano-vaco dadhānasya
nait cyāutnāiḥ āpayataḥ
kṛpam *naṣmane ṛtāvane
Soma hare vadhar *jadhi [31]

Against the unbelieving mortal, the oppressor (proudly) raising up (his) wicked head, smite, O golden Haoma, (thy) weapon for protecting the body of the righteous. Against the unrighteous distorter of Truth, the soul-destroyer, (who though) bearing in mind the commandments of this (true) religion, (still) never applies (them) in his actions, (against such an one) smite, O golden Haoma, (thy) weapon for protecting the body of the righteous.

32. paiti jahikayāi yātumaityāi
maoṣanō-kairiyāi upaṣtā-bāiryāi,
yeṇhe frafravaiti manō
yaṭā awrəm vātō-śūtəm,
kəhrpəm nāṣəmnāi aṣaone,
Haoma zāire, vadarə jaiḍi;
(yaṭ hē) kəhrpəm nāṣəmnāi
aṣaone;
Haoma zāire, vadarə jaiḍi.

prati *hasrikāyāi yātumatyāi
modana-karyāi upastha-bharyāi
yasyāḥ prapravati mano
yathā abhram vātasūtam
kṛpam *naṣmane ṛtāvane
Soma hare vadhar *jadhi
(yadasyāḥ) kṛpam *naṣmane
ṛtāvane
Some hare vadhar *jadhi [32]

Against the wicket-woman, full of wiles, voluptuous and lustful, whose mind tosses about like a wind-driven cloud, smite, O golden Haoma, (thy) weapon for protecting the body of the righteous; indeed (against) her do thou smite, O golden Haoma, (thy) weapon for protecting the body of the righteous.

OLD PERSIAN TEXT

Inscriptions of Darius
(B.C. 521-486)

Behistan Inscriptions, Column I

1. adam dārayavauš χšāyaθiya vazraka χšāyaθiya χšāyaθiy-
2. ānām χšāyaθiya pārsaiy χšāyaθiya dahyūnām višt-
3. āspahyā puṣṣa aršāmahyā napā haχāmanišiya · θātiy
4. dārayavauš χšāyaθiya manā pitā vištāspa vištāspahyā pitā arš-
5. āma aršāmahyā pitā ariyāramna ariyāramnahyā pitā cišpiš
cišpāiš
6. pitā haχāmaniš · θātiy dārayavauš χšāyaθiya avahyarādiy

SANSKRIT RENDERING

1. aham dhārayavasuh kṣāyatriyaḥ vajrakaḥ kṣāyatriyaḥ kṣāyatri-
2. ānām kṣāyatriyaḥ pārasike kṣāyatriyaḥ dasyūnām višt-
3. āśvasya putraḥ *rṣāmasya napāt *sakhāmaniṣyaḥ. śamsati
4. dhārayavasuh kṣāyatriyaḥ mama pitā vištāśvaḥ vištāśvasya pitā
*rṣ-
5. āmaḥ *rṣāmasya pitā *aryāramnaḥ *aryāramnasya pitā
*casiśviḥ *casiśveḥ
6. pitā *sakhāmaniṣaḥ. śamsati dhārayavasuh kṣāyatriyaḥ
*avasya- *rādhi

ENGLISH TRANSLATION

1. I am Darius, the Great King, King of Kings,
2. King in Persia, King of countries, Hystaspes'
3. son, Arsames' grandson, an Achaemenian. Says
4. Darius the King : My father [was] Hystaspes, Hystaspes' father
[was] Arsames,
5. Arsames' father [was] Ariaramnes, Ariaramnes' father [was]
Teispes, Teispes
6. father [was] Achaemenes. Says Darius the King : Therefore

OLD PERSIAN TEXT

7. vayam haṣāmanišiyā ṭahyāmahiy · hacā paruviyata ā mātā amahy
8. hacā paruviyata hyā amāḥam taumā ḡšāyaṭiyā āha ·
9. ṭātiy dārayavauš ḡšāyaṭiya VIII manā taumāyā tyaiy paruvam
10. ḡšāyaṭiyā āha adam navama IX dūvitāparanam vayam ḡšāyaṭiyā
11. amahy · ṭātiy dārayavauš ḡšāyaṭiy · vašnā auramazd
12. āha adam ḡšāyaṭiya amiy · auramazdā ḡšāssam manā frābara

SANSKRIT RENDERING

7. vayam *sakhāmanīṣyāḥ *śasyāmasi sacā pūrvyataḥ *āmātāḥ(?) smasi
8. sacā pūrvyataḥ syā asmākam tokma kṣāyatryā āsit.
9. śamsati dhārayavasuh kṣāyatryaḥ mama tokmani tye pūrvam
10. kṣāyatryā āsan. aham navamaḥ. dvitā-parṇam vayam kṣāyatryāḥ
11. smasi. śamsati dhārayavasuh kṣāyatryaḥ *vašnā asuramedhasaḥ
12. aham kṣāyatryaḥ asmi. asuramedhāḥ kṣatram mama prābharat.

ENGLISH TRANSLATION

7. we are called Achaemenides. From days of yore (we) have been noble (?);
8. from days of yore our family had been royal.
9. Says Darius the King : VIII in my family that formerly
10. were kings. I am the ninth. IX successively we
11. have been kings. Says Darius the King : By the favour of Ahuramazda
12. I am King. Ahuramazda gave me the kingdom.

OLD PERSIAN TEXT

13. θātiy dārayavaus χšāyaθiya imā dahyāva tyā manā patiyāiša vašnā
14. auramazdāha adamšām χšāyaθiya āham pārša ūvja bābairuš
15. aθurā arabāya mudrāya tyaiy drayahyā sparda yauna māda armina kat
16. patuka parθava zranka haraiva uvārazmīy bāxtriš suguda gadāra
17. saka θataguš harauvatiš maka fraharavam dahyāva XXIII · θātiy dāra
18. yavaus χšāyaθiya imā dahyāva tyā manā patiyāiša vašnā

SANSKRIT RENDERING

13. śamsati dhārayavasuh kṣāyatryaḥ imāḥ dasyavaḥ tyāḥ mama pratyaguḥ vašnā
14. asuramedhasaḥ aham āsam kṣāyatryaḥ āsam *pārśaḥ *suvajaḥ bāveruḥ
15. *aśurā *arabāyaḥ *mudrāyaḥ tye jrayasi-ā *svardaḥ yavanā *mādaḥ *armināḥ
16. *katpatukaḥ *parśavaḥ *jrankaḥ *harevaḥ *suvārjmyaḥ *bākhtriḥ *sugudaḥ gandhāraḥ
17. śakaḥ *śataguḥ sarasvati *makaḥ prasarvam dasyavaḥ 23.
18. śamsati dhārayavasuh kṣāyatryaḥ imāḥ dasyavaḥ tyāḥ mama pratyaguḥ *vašnā

ENGLISH TRANSLATION

13. Says Darius the King : These countries that came to me; by the favour
14. of Ahuramazda I was their king : Persia, Susiana, Babylonia,
15. Assyria, Arabia, Egypt, those on the sea, Sparda, Ionia, Media, Armenia,
16. Cappadocia, Parthia, Drangiana, Aria, Chorasmia, Bactria, Sogdiana, Gandhāra,
17. Scythia, Sattagydia, Arachosia, the Macae; in all 23 countries.
18. Says Darius the King : These countries which came unto me, by the favour

OLD PERSIAN TEXT

19. auramazdāha manā bandakā āhatā manā bājim abaratā tya
šām hacāma
20. aθahya χšapavā raucapativā ava akunavayatā · θātiy
dārayavaus
21. χšāyaθiya atar imā dahyāva martiya hya āgariya āha avam
22. ubartam abaram hya arika āha avam ufrastam aparsam · vašnā
auramazdāha
23. imā dahyāva tyanā manā dātā apariyāya yaθāšām hacāma
aθahya
24. avaθā akunavayatā · θātiy dārayavaus χšāyaθiya auramazdā

SANSKRIT RENDERING

19. asuramedhasaḥ mama bandhakāḥ āsan mama *bhājim
abharanta tyat- āsām sacā-mat
20. aśaṃsi kṣapaḥ-vā rocaḥ- prativā *avat akriyata. śaṃsati
dhāraya-
21. vasuḥ kṣāyatriyaḥ antaḥ imāḥ dasyūn martyaḥ syaḥ.....āsīt
*avam
22. subhṛtam abharam syaḥ arikaḥ āsīt *avam supṛṣtam
apṛccham. *vašnā asura-
23. medhasaḥ imāḥ dasyavaḥ *tyanā mama hitā uparyāyan yathā
āsām sacā-mat aśaṃsi
24. *avathā akriyata. śaṃsati dhārayavasūḥ kṣāyatriyaḥ
asuramedhāḥ

ENGLISH TRANSLATION

19. of Ahuramazda became submissive to me (and) they bore trib-
ute to me; what to them from me
20. was told by night or by day that was done. Says Darius
21. the King : Within these countries the man who was royal, him
22. I rewarded well, (and) who was inimical, him I punished well.
By the favour of Ahuramazda
23. these countries from him, by law, came over to me; what to
them from me was told
24. that was done. Says Darius the King : Ahuramazda

OLD PERSIAN TEXT

25. maiy ima χšassam frābara auramazdāmaiy upastām abara yātā
ima χšassam
26. hamadārayaiy vašnā auramazdāha ima χšassam dārayāmiy .
27. θātiy dārayavauš χšāyaθiya ima tya manā kartam pasāva yaθā
28. χšāyaθiya abavam . kabūjiya nāma kūrauš pušsa amāxam
taumāyā
29. hauvam idā χšāyaθiya āha . avahyā kabūjiyahyā brātā
30. bardiya nāma āha hamātā hamapitā kabūjiyahyā . pasāva

SANSKRIT RENDERING

25. me imat kṣatram prābharat asuramedhāḥ me upasthām
abharat yāvat imat kṣatram
26. samadhāraye *vašnā asuramedhasaḥ imat kṣatram dhārayāmi.
27. śamsati dhārayavasuh kṣāyatryaḥ imat tyat mama kṛtam
paścā* avatyathā
28. kṣāyatryaḥ abhavam. *kambujsyaḥ nāma kuroḥ putraḥ
asmākam tokmani
29. asau iha kṣāyatryaḥ āsit. *avasya *kambujsyasya bhrātā
30. *barhyaḥ nāma āsit samāta samapitā *kambujsyasya. paścā-
*avat

ENGLISH TRANSLATION

25. on me has bestowed this sovereignty; Ahuramazda has bore
me aid until I held this kingdom;
26. by the favour of Ahuramazda I possess this kingdom.
27. Says Darius the King : This (was) what (was) done by me after
that when I
28. became king. Cambyses by name, Cyrus' son, was in our fam-
ily;
29. he was king here. Of this Cambyses, [there was] a brother,
30. Smerdis by name (having) the same mother and the same fa-
ther (as) Cambyses. After that

OLD PERSIAN TEXT

31. kabūjiya avam bardiyam avāja · yaθā kabūjiya bardiyam avāja
kārahya
32. naiy azdā abava tya bardiya avajata · pasāva kabūjiya
mudrāyam
33. ašiyava yaθā kabūjiya mudrāyam ašiyava pasāva kāra arika
abava ·
34. pasāva drauga dahyauvā vasiy abava utā pārsaiy utā māдай
utā
35. aniyāuvā dahyušuvā · θātiy dārayavauš χšāyaθiya
36. pasāva I martiya maguš āha gaumāta nāma hauv udapatatā
hacā

SANSKRIT RENDERING

31. *kambujyaḥ *avam *barhyam avāhan. yathā *kambujyaḥ
*barhyam avāhan kārasya
32. net addhā abhavat tyat *barhyaḥ avahataḥ. paścā *avat
*kambujyaḥ *mudrāyam
33. acyavat. yathā *kambujyaḥ *mudrāyam acyavat paścā- *avat
kāraḥ arikaḥ abhavat.
34. paścā- *avat droghaḥ dasyau-ā vaśe abhavat uta pārasike uta
*māde uta
35. anyāsu-ā dasyuṣu-ā. śaṃsati dhārayavasuh kṣāyatryaḥ
36. paścā- *avat 1 martyaḥ *maguḥ āsit *gomātaḥ nāma asau
udapatata sacā

ENGLISH TRANSLATION

31. Cambyses killed this Smerdis. When Cambyses killed Smerdis
to the people
32. (it was) never known that Smerdis (was) killed. After that
Cambyses went to Egypt.
33. When Cambyses went to Egypt, after that the people became
hostile.
34. Afterwards rebellion in the country was rampant whether in
Persia or in Media or
35. in other countries. Says Darius the King : After
36. this (there) was one man, a Magian, Gometes by name, he
rose up from

OLD PERSIAN TEXT

37. paišiyāuvādāyā arakadriš nāma kaufa hacā avadaša viyaḡnahya māhyā
 38. XIV raucabiš θakatā āha yadiy udapatatā hauv kārahyā avaθā
 39. adurujiya adam bardiya amiy hya kūrauš pušsa kabūjiyahyā
 40. brātā pasāva kāra haruva hamissiya abava hacā kabūjiyā abiy avam
 41. ašiyava utā pārsa utā māda utā aniyā dahyāva · χšassam hauv
 42. agarbāyātā garmapadahya māhyā IX raucabiš θakatā āha avaθā

SANSKRIT RENDERING

37. *pešyauvādāyāḥ *arakadriḥ nāma *kobhaḥ sacā *avadhaḥ
 *vyakhnasya
 38. māsi-ā 14 rocobhiḥ śakitā āsan yadi udapatata. asau kārasya
 *avathā
 39. adruhyat aham *barhyaḥ asmi syaḥ kuroḥ putraḥ
 *kambuḃjasya
 40. bhrātā. paścā-*avat kāraḥ sarvaḥ *samithryaḥ abhavat sacā
 *kambuḃjāt abhi avam
 41. acyavat uta *pārsaḥ uta *mādaḥ uta anyāḥ dasyavaḥ. kṣatram
 asau
 42. aḡrbhāyata *gharmapadasya māsi-ā 9 rocobhiḥ śakitā āsan
 *avathā

ENGLISH TRANSLATION

37. Paišiyāuvādā; a mountain, Arakadri by name from there in the month of Viyakhna
 38. when 14 days were passed by when (he) rose up. He to the people thus
 39. deceived : I am Smerdis, the son of Cyrus, brother of Cambyses.
 40. After that all people became hostile (and) from Cambyses to him
 41. went (over), both Persia and Media and the other countries. The kingdom he
 42. seized; in the month of Garmapada 9 days were passed by when the kingdom

OLD PERSIAN TEXT

43. χšassam agarbāyatā · pasāva kabūjiya uvāmaršiyuš amariyatā.
· θātiy
44. dārayavaus χšāyaθiya aita χšassam tya gaumāta hya maguš
adinā
45. kabūjiyam aita χšassam hacā paruviyata amāχam taumāyā
46. āha · pasāva gaumāta hya maguš adinā kabūjiyam utā pārsam
utā
47. mādam utā aniyā dahyāva · hauv āyasatā uvāipašiyam akutā
hauv
48. χšāyaθiya abava · θātiy dārayavaus χšāyaθiya naiy āha martiya

SANSKRIT RENDERING

43. kṣatram agrbhāyata. paścā- *avat *kambujyaḥ svāmṛtyuḥ
amriyata. śaṃsati
44. dhārayavasuh kṣāyatriyaḥ etat kṣatram tyat gomātaḥ syaḥ
*maguḥ ajināt
45. *kambujyam etat kṣatram sacā pūrvyataḥ asmākam tokmani
āsīt.
46. paścā- *avat gomātaḥ syaḥ *maguḥ ajināt *kambujyam uta
*pārsam uta
47. *mādam uta anyāḥ dasyūn. asau ayacchata *svaipatyam akīta
+asau
48. kṣāyatriyaḥ abhāvat. śaṃsati dhārayavasuh kṣāyatriyaḥ net āsīt
martyaḥ

ENGLISH TRANSLATION

43. he seized. After that Cambyzes died a self-death. Says
44. Darius the King : This kingdom which Gometes the Magian
won from
45. Cambyzes, this kingdom, from long ago, was in our family
46. After that Gometes the Magian won it (from) Cambyzes, both
Persia and
47. Media and the other provinces. He strove (and) made own-
possession; he
48. became king. Says Darius the King : There was never any man,

OLD PERSIAN TEXT

49. naiy pārsa naiy māda naiy amāχam taumāyā kašciy hya avam
gau
50. mātam tyam magum χšassam dītam caχriyā · kārāšim hacā
daršam
51. atarsa kārām vasiy avājaniyā hya paranam bardiyam adānā ·
avahyar
52. ādiy kārām avājaniyā mātyamām χšnāsātiy tya adam naiy bard
53. iya amiy hya kūrauš pušsa · kašciy naiy adaršnauš cišciy
θastanaiy
54. pari gaumātam tyam magum yātā adam arasam · pasāva adam
aura

SANSKRIT RENDERING

49. net *mādaḥ net asmākam tokmani kaścīt syaḥ *avaṃ *go-
50. mātam tyam *magum kṣatram jitam +cakriyāt. kārāḥ- sīm sacā
dhr̥ṣam
51. atrasat kārām vaše avāhanyāt syaḥ purā *barhyam ajānāt.
*avasya-
52. *rādhi kārām avāhanyāt mā-tyat-mām *jñācchati tyat aham
net *barh-
53. yaḥ asmi syaḥ kuroḥ putraḥ. kaścīt net adhr̥ṣṇot cit-cit
*śastane
54. pari *gomātam tyam *magum yāvātā aham ārccham. paścā-
*avat aham asura

ENGLISH TRANSLATION

49. neither a Persian nor a Median nor anybody in our family who
could have made this Gometes
50. the Magian deprived of the kingdom. The people from him
greatly
51. feared : he may abundantly kill the people who formerly knew
Smerdis. Because of
52. this he would kill people, (thinking :) 'May (the people) never
know that I am not
53. Smerdis, Cyrus' son.' Anyone did not dare say anything
54. against Gometes the Magian, until I came. After that I

OLD PERSIAN TEXT

55. mazdām patiyāvahyaiy · auramazdāmai upastām abara ·
bāgayādaiš
56. māhyā X raucabiš θakatā āha avaθā adam hadā kamnaibiš
martiyaibiš
57. avam gaumātam tyam magum avājanam utā tyaišaiy fratamā
58. martiyā anušiya āhatā sikayauvatiš nāmā didā nisāya nāmā
59. dahyauš māday avadašim avājanam · χšassamšim adam
adinam
60. vašnā auramazdāha adam χšāyaθiya abavam · auramazdā
χšassam manā frābara

SANSKRIT RENDERING

55. medhasam pratyāvasye. asuramedhāḥ-me *upasthām abharat.
*bhāgayājeh
56. māsi-ā 10 rocobhiḥ śakitā āsan *avathā aham saha *kamnebhiḥ
martyebhiḥ
57. *avam *gomātam tyam *magum avāhanam uta tye- +se
pratamāḥ
58. martyāḥ *anutyāḥ āsanta *śikayasvati nāma *dighā *niśāyaḥ
nāma
59. dasyuḥ *māde *avadha- sim avāhanam. kṣatram-sim aham
ajinam.
60. *vašnā +asuramedhasaḥ aham kṣāyatryaḥ abhavam .
asuramedhāḥ kṣatram +mama prābharat.

ENGLISH TRANSLATION

55. supplicated Ahuramazda. Ahuramazda granted me aid.
56. In the month of Bāgayādi 10 days were passed by when I,
with a few men
57. killed that Gometes the Magian, and those (who) were his chief
58. followers (there is) a fortress named Sikaya(x)uvati and Nisāya
by name
59. a province in Media there I killed him. I won the kingdom (from)
him.
60. By the favour of Ahuramazda I became king. Ahuramazda
granted the kingdom to me.

OLD PERSIAN TEXT

61. θātiy dārayavauš χšāyaθiya χšassam tya haca amāχam ta
 62. taumāyā parābartam āha ava adam patipadam akunavam
 adamšim gāθava
 63. avāstāyam yaθā paruvamciy avaθā adam akunavam · āyadanā
 64. tyā gaumāta hya maguš viyaka adam niyassārayam kārahyā
 65. abicariš gaiθāmcā māniyamcā viθbiščā tyādiš gaumāta hya
 66. maguš adinā. adam kāram gāθavā avāstāyam pārsamcā
 mādamcā

SANSKRIT RENDERING

61. śamsati dhārayavasuh kṣāyatryah kṣatram tyat sacā asmākam
 62. tokmanaḥ parābhṛtam āsīt *avat aham pratipadam akṛṇavam.
 aham-sim
 63. gātau-ā avāsthāpayam yathā pūrvam-cit *avathā aham
 akṛṇavam. āyajanā
 64. tyā gomātaḥ syaḥ *maguḥ vyakhanat aham nyaśrāyayam
 kārasya *abhi-
 65. carih *gethām-ca *māniyam-ca viḍbhiś-ca tyā-*dih gomātaḥ
 syaḥ
 66. *maguḥ ajināt. aham kāram gātau-ā avāsthāpayam *pārsam-
 ca *mādamca

ENGLISH TRANSLATION

61. Says Darius the King : The kingdom which had been taken
 away from our family,
 62. that I made restored. I to the (proper) place
 63. established it, as before, so I made the sanctuaries
 64. which Gometes the Magian destroyed. I restored (them); of the
 people,
 65. pasture-field and property and estate from the houses which
 Gometes the
 66. Magian took away (that I restored). I established the people in
 (proper) place, (be it) Persia or Media

OLD PERSIAN TEXT

67. utā aniyā dahyāva · yaθā paruvamciy avaθā adam tya parābartam
 68. patiyābaram · vašnā auramazdāha ima adam akunavam · adam hamataχšaiy
 69. yātā viθam tyām amāχam gāθavā avāstāyam yaθā paruvam ciy
 70. avaθā · adam hamataχšaiy vašnā auramazdāha yaθā gaumāta hya maguš
 71. viθam tyām amāχam naiy parābara · θātiy dārayavaus χšāyaθiya
 72. ima tya adam akunavam pasāva yaθā χšāyaθiya abavam · θatiy

SANSKRIT RENDERING

67. uta anyāḥ dasyavaḥ. yathā pūrvam-cit *avathā aham tyat parābhṛtam
 68. pratyābharam. *vašnā asuramedhasaḥ imat aham akr̥ṇavam. aham samatakṣe
 69. yāvatā viśam tām asmākam gātau-ā +avāsthāpayam yathā pūrvam-cit.
 70. *avathā aham samatakṣe *vašnā asuramedhasaḥ yathā gomātaḥ saḥ *maguḥ
 71. viśam tyām asmākam net parābharat. śaṃsati dhārayavasūḥ kṣāyatryaḥ
 72. imat tyat aham akr̥ṇavam paścā-*avat yathā kṣāyatryaḥ abhavam.

ENGLISH TRANSLATION

67. or the other provinces. As before, so I brought back the (kingdom)
 68. taken away. By the grace of Ahuramazda this I did. I engaged (myself)
 69. till that our (royal) house on the foundation I established, as (it was) before.
 70. Thus I engaged (myself), by the grace of Ahuramazda, that Gometes the Magian
 71. did not take away our (royal) house. Says Darius the King :
 72. This (is) what I did until afterwards I became king. Says

OLD PERSIAN TEXT

73. dārayavauš χšāyaθiya yaθā adam gaumātam tyam magum avājanam
 74. pasāva I martiya āssina nāma upadarmahyā puṣsa hauv udapatā ūvjaiy.
 75. kārahyā avaθā aθaha adam ūvjaiy χšāyaθiya amiy · pasāva
 76. ūvjiyā hamissiyā abava abiy avam āssinam ašiyava · hauv χšāyaθiya
 77. abava ūvjaiy · utā I martiya bābiruviya naditabaira nāma aina irahyā
 78. puṣsa hauv udapatatā bābirauv · kāram avaθā adurujiya adam nab

SANSKRIT RENDERING

73. śamsati dhārayavasuh kṣāyatryaḥ yathā aham *gomātam tyam *magum avāhanam
 74. paścā- *avat I martyaḥ *ātriṇaḥ nāma *upadaranmasya putraḥ asau udapatata *suvaje.
 75. kārasya *avathā aśamsat aham *suvaje kṣāyatryaḥ asmi. paścā- *avat
 76. *suvajyāḥ *samithryāḥ abhavan abhi *avam acyavan. +asau kṣāyatryaḥ abhavat *suvaje.
 77. uta I martyaḥ bāveruvyaḥ *nadintaberaḥ nāma *enerasya
 78. putraḥ asau udapatata bāverau. kāram *avathā adruhyat aham *nab-

ENGLISH TRANSLATION

73. Darius the King : When I killed Gometes the Magian,
 74. after that one man Āssina by name, Upadaranma's son, he rose up in Susiana.
 75. To the people (he) thus said : 'I am king in Susiana.' After that the
 76. Susians became hostile (and) went over to him. He king became in Susiana.
 77. And one man, a Babylonian, Nadintabaira by name, Ainaira's
 78. son, he rose up in Babylon. To the people (he) thus lied : I

OLD PERSIAN TEXT

79. ukudracara amiy hya nabunaitahyā pussa · pasāva kāra hya bābiruviya
 80. haruva abiy avam naditabairam ašiyava · bābiruś hamissiya abava ·
 81. χšassam tya bābiraυv hauv agarbāyatā · θātiy dārayavaυś χšāya
 82. θiya pasāva adam frāišayam ūvjam · hauv āssina basta anayatā abiy mām ·
 83. adamśim avājanam · θātiy dārayavaυś χšāyaθiya pasāva adam
 84. bābirum ašiyavam abiy avam naditabairam hya nabukudracara agaυbatā

SANSKRIT RENDERING

79. ukudracaraḥ asmi syaḥ *nabunetasya putraḥ. paścā-avat kāraḥ syaḥ bāveruvyaḥ
 80. sarvaḥ abhi avam nadintaberaṁ acyavat. bāveruḥ samithryaḥ abhavat.
 81. kṣtraṁ tyat bāverau asau agrbhāyata. śaṁsati dhārayavasuh kṣāyatriyaḥ
 82. paścā- *avat aham praiśayam *suvajam. asau *ātriṇaḥ baddhaḥ aniyata abhi mām.
 83. aham- +sīm avāhanam. śaṁsati dhārayavasuh kṣāyatriyaḥ paścā- *avat aham
 84. bāverum acyavam abhi *avam *nadintaberaṁ syaḥ *nabukudracaraḥ *agobhata.

ENGLISH TRANSLATION

79. am Nebuchadrezzar, the son of Nabunaita. After that the Babylonian people
 80. all went over to this Nadintabaira. Babylon became hostile.
 81. The kingdom in Babylon he seized. Says Darius the King :
 82. After that I sent (a message) to Susiana, This Assina was led to me bound;
 83. I slew him. Says Darius the King : Afterwards, I
 84. went to Babylon, against that Nadintabaira who called (himself) Nebuchadrezzar.

OLD PERSIAN TEXT

85. kāra hya naditabairahyā tigrām adāraya avadā aištātā · utā
 86. abiš nāviyā āha · pasāva adam kāram maškāuvā avākanam
 aniyam uša
 87. bārim akunavam aniyahyā asam frānayam · auramazdāmai
 upastām
 88. abara · vašnā auramazdāha tigrām viyatarayāmā · avadā avam
 kāram
 89. tyam naditabairahyā adam ajanam vasiy · āssiyādiya hya
 māhyā XXVI
 90. raucabiš θakatā āha avaθā hamaranam akumā · θātiy
 dārayavauš

SANSKRIT RENDERING

85. kārāḥ syaḥ *nadintaberasya *tigrām adhārayat *avadha
 atiṣṭhata. uta
 86. *abhiḥ nāvyā āsit. paścā- *avat aham kāram *maskāsu-ā
 avākhanam anyam *uṣṭra-
 87. bhārim akṛṇavam anyasya aśvam prāṇayam. asuramedhāḥ-
 me *upasthām
 88. abharat. *vašnā asuramedhasaḥ *tigrām vyatarayāma. *avadha
 *avam kāram
 89. tyam *nadintaberasya aham ahanam vaśe. *ātriyājyasya māsiā
 26
 90. rocobhiḥ śakitā āsan *avathā samaraṇam akṛma. saṁsati
 dhārayavasuh

ENGLISH TRANSLATION

85. The army of Nadi(n)tabaira held the Tigris; there (he) halted. and
 86. nearby a flotilla (?) was. After that I placed (my) army on floats-
 of-skin; some
 87. I made camel-borne, for others I brought horses. Ahuramazda
 gave me help.
 88. By the favour of Ahuramazda (we) crossed the Tigris. There
 that army
 89. of Nadintabaira I killed exceedingly; in the month of Āssiyādiyā
 XXVI
 90. days were past by when we fought the battle. Says Darius

OLD PERSIAN TEXT

91. χšāyaθiya pasāva adam bābirum ašiyavam · aθiy bābirum yaθā naiy
92. upāyam zāzāna nāma vardanam anuv ufrātuvā avadā hauv nadita
93. baira hya nabukudracara agaubatā āiš hadā kārā patiṣ mām hamaranam
94. cartanaiy · pasāva hamaranam akumā · auramazdāmaiypastām abara vašnā aurama
95. zdāha kārām tyam naditabairahyā adam ajanam vasiy aniya āpiyā āh yatā
96. āpišim parābara · anāmakahya māhyā II raucabiš θakatā āha avaθā hamaranam akumā.

SANSKRIT RENDERING

91. kṣāyatriyaḥ paścā- avat aham vāverum acyavam. adhi bāverum yathā net
92. upāyam *jājānaḥ nāma vṛjanam anu *suprātau-ā *avadha asau *nadinta-
93. beraḥ syaḥ *nabukudracaraḥ *agobhata ait saha kārā prati mām samaraṇam
94. *cartane. paścā- *avat samaraṇam akṛma. asuramedhāḥ-me *upasthām abharat. *vašnā asuramedh-
95. asaḥ kārām tyam *nadintaberasya aham ahanam vaše. anyāḥ *āpyām.....
96. *āpi- śim parābharat. anāmakasya māsi-ā 2 rocobhiḥ śakitā āsan *avathā samaraṇam akṛma.

ENGLISH TRANSLATION

91. the King : After that I went off to Babylon. Near Babylon when I had not
92. arrived, (there is) a village named Zāzāna on the Euphrates, there he, Nadintabaira
93. who called (himself) Nebuchadrezzar, came with (his) army against me
94. to make fight. After that (we) did fight. Ahuramazda bore me aid. By the favour of
95. Ahuramazda that army of Nadintabaira I killed utterly. Some in the stream [were thrown away].
96. The stream carried it away. In the month of Anāmaka 2 days were passed by when (we) fought the battle.

